

ENVIRONMENTAL ASSESSMENT

**PROPOSAL OF CRITICAL HABITAT FOR THE NORTHERN GREAT PLAINS
BREEDING POPULATION OF PIPING PLOVERS
(*Charadrius melodus*)**

**Prepared by
U.S. Fish and Wildlife Service
South Dakota Ecological Services Field Office
Pierre, South Dakota**

June 2002

Table of Contents

1.0	Purpose for the Proposed Action	1
2.0	Need for the Action	1
2.1	Background	2
2.2	Critical Habitat	5
3.0	Description of Alternatives	6
3.1	Alternative Considered But Not Fully Evaluated	7
3.2	Alternative A. No Action Alternative	7
3.3	Action Alternatives	7
3.3.1	Alternative B. Designation as Identified in the Proposed Rule Proposed Action	10
3.3.2	Alternative C. Essential Habitat Identified in the 1988 Great Lakes and Northern Great Plains Piping Plover Recovery Plan	16
3.3.3	Alternative D. Essential Habitat Identified in the 1994 Technical/Agency Draft Revised Recovery Plan on the Great Lakes and Northern Great Plains	17
3.4	Table 1. Summary of Actions by Alternative	21
4.0	Description of the Affected Environment	24
4.1	Physical Environment	24
4.2	Fish and Wildlife	25
4.3	Human Environment	26
4.4	Tribal Lands	26
5.0	Environmental Consequences	28
5.1	Piping Plovers	29
5.2	Fish, Wildlife, and Plants	30
5.3	Recreation	30
5.4	Agriculture	32
5.5	Water Management	33
5.6	Socioeconomics	33
5.7	Archeological and Cultural Resources	35
5.8	Environmental Justice	35
5.9	Cumulative Impacts	36
5.10	Table 2. Summary of Environmental Consequences by Alternative	37
6.0	Council on Environmental Quality Analysis of Significance	40
6.1	Context	40
6.2	Intensity	40

7.0	Contacts and Coordination With Others	41
7.1	List of Agencies, Organizations, and Persons to Whom Copies of This Environmental Assessment Were Sent or Contacted	42
7.2	Comments Received During Comment Period and Responses	48
8.0	List of Contributors	49
9.0	References Cited	49

1.0 Purpose for the Proposed Action

The purpose of the proposed action is to designate critical habitat for the northern Great Plains breeding population of piping plovers (*Charadrius melodus*) by utilizing provisions of the Endangered Species Act of 1973, as amended (Act). The purpose of the Act is to conserve the ecosystems upon which endangered and threatened species depend. Critical habitat designation identifies areas essential to the survival and recovery of the piping plover, and describes physical and biological features within critical habitat that require special management considerations to achieve conservation of the species.

2.0 Need for the Action

The need for this action is to comply with Section 4 of the Act, which requires that critical habitat be designated for endangered and threatened species unless such designation is not prudent. We published the final rule (50 FR 50726) on December 11, 1985, designating the Great Lakes population (Illinois, Indiana, Michigan, northeastern Minnesota, New York, Ohio, Pennsylvania, Wisconsin, and Ontario) as endangered. Piping plovers along the Atlantic coast (Quebec, New Foundland, Maritime Provinces, and States from Maine to Florida), in the northern Great Plains (Iowa, northwestern Minnesota, Montana, Nebraska, North Dakota, South Dakota, Alberta, Manitoba, and Saskatchewan), and on migratory routes and on their wintering grounds also were designated as threatened.

The final listing rule for the piping plover indicated that designation of critical habitat was not determinable. Thus, designation was deferred and no further action was subsequently taken to designate critical habitat for piping plovers. On December 4, 1996, Defenders of Wildlife (Defenders) filed a suit (Defenders of Wildlife and Piping Plover v. Babbitt, Case No. 96CV02965) against the Department of Interior and the Fish and Wildlife Service over the lack of designation of critical habitat for the Great Lakes population of the piping plover. Defenders filed a similar suit (Defenders of Wildlife and Piping Plover v. Babbitt, Case No. 97CV000777) for the northern Great Plains piping plover population in 1997. During November and December 1999 and January 2000, we began negotiating a schedule for piping plover critical habitat decisions with Defenders. On February 7, 2000, before the settlement negotiations were concluded, the United States District Court for the District of Columbia issued an order directing us to publish a proposed critical habitat designation for nesting and wintering areas of the Great Lakes breeding population of piping plovers by June 30, 2000, and for nesting and wintering areas of northern Great Plains piping plovers by May 31, 2001. A subsequent order, after we requested the court to reconsider its original order relating to final critical habitat designation, directed us to finalize the critical habitat designations for the Great Lakes population by April 30, 2001, and for the northern Great Plains population by March 15, 2002. Critical habitat proposals for the Great Lakes breeding population, and wintering habitat for all piping plovers were published on July 6, 2000 (65 FR 41812 and 65 FR 41782). On June 12, 2001, we published a proposal to designate critical habitat for piping plovers in Minnesota, Montana, North Dakota, South Dakota, and Nebraska (66 FR 31760).

The comment period was open until August 13, 2001. During this 60-day comment period, we held five public meetings (Glasgow, Montana on July 10, 2001; Bismarck, North Dakota on July 12, 2001; Pierre, South Dakota on July 16, 2001; Yankton, South Dakota on July 17, 2001; and Grand Island, Nebraska on July 18, 2001). On July 6, 2001, we published a notice in the Federal Register (66FR113) announcing the availability of the draft environmental assessment for the proposed determination. On December 28, 2001, we published a notice in the Federal Register (66FR249) announcing the reopening of the comment period and a notice of the availability of the draft economic analysis on the proposed rule. This comment period was open until January 28, 2002. However, before that reopening the Service's web sites and electronic mail were disconnected in response to a court order in an unrelated lawsuit. In response to comments received during the December-January comment period the Service sought relief from the courts and the court took action extending the time for the final rule. On March 21, 2002, we again published a notice in the Federal Register (67FR55) extending the comment period until May 20, 2002.

Our position is that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the National Environmental Policy Act (NEPA) in connection with designating critical habitat under the Act of 1973, as amended. We published a notice outlining our reasons for this determination in the Federal Register on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (Ninth Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)). However, when the range of the species includes States within the Tenth Circuit, pursuant to the Tenth Circuit ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75 F.3d 1429 (Tenth Cir. 1996), we will complete a NEPA analysis. The range of the northern Great Plains population of piping plovers includes the States of Kansas and Colorado, which are within the Tenth Circuit; therefore, we must complete an analysis.

Critical habitat is one of several provisions of the Act that aid in protecting the habitat of listed species until populations have recovered and threats have been minimized so that the species can be removed from the list of threatened and endangered species. Critical habitat designation is intended to assist in achieving long-term protection and recovery of piping plovers and the ecosystems upon which they depend. Section 7(a)(2) of the Act requires consultation for Federal actions that may affect critical habitat to avoid destruction or adverse modification of this habitat. Further explanation of critical habitat and its implementation is provided below.

2.1 Background

The piping plover (*Charadrius melodus*) is a small [approximately 17-18 cm (6.7-7.1 in) long and 43-63 g (1.5-2.2 oz) in weight] (Haig 1992), migratory member of the shorebird family (*Charadriidae*). It is one of six species of belted plovers in North America. During the breeding season adults have single black bands across both the forehead and breast, orange legs and bill, and pale tan upper parts and are white below. The adults lose the black bands and their bill becomes grayish-black during the winter. The plumage of juveniles is similar to that of wintering adults.

Three breeding populations of piping plovers in the United States and Canada have been described based on their breeding ranges: the northern Great Plains population, the Great Lakes population, and the Atlantic Coast population.

The northern Great Plains population's breeding range includes southern Alberta, northern Saskatchewan, and southern Manitoba; south to eastern Montana, North and South Dakota, southeastern Colorado, Iowa, Nebraska, and east to Lake of the Woods in north-central Minnesota. The majority of the United States pairs are in the Dakotas, Nebraska, and Montana (Plissner and Haig 1997). Fewer birds nest in Minnesota, Iowa, and Colorado with occasional nesting in Oklahoma and Kansas.

Historic data on the distribution of northern Great Plains piping plovers are somewhat scarce, with regular surveying efforts beginning after 1980. Some breeding records do exist for a majority of North Dakota counties (U.S. Fish and Wildlife Service and North Dakota Game and Fish Department 1997); Lake of the Woods County, in Minnesota (U.S. Fish and Wildlife Service 2000b); counties along the Missouri River, as well as Codington and Day Counties in South Dakota (South Dakota Ornithologists' Union 1991); and counties along the Missouri, Loup, Niobrara, Elkhorn, and Platte Rivers in Nebraska (Ridgeway 1874, Moser 1942, Heinemann 1944, Ducey 1983, Dinan et al. 1993, Nebraska Game and Parks Commission 1995, Nebraska Game and Parks Commission 2001). Plovers were first reported in Montana in 1967 in Phillips County and also were observed in Sheridan and Valley Counties during the 1970s (Carlson and Skaar 1976). Nesting was first observed in Colorado in 1949 and a few reports of non-nesting birds occurred during the 1950s and 1960s (Bailey and Niedrich 1965), but there are no reports of nesting between 1949 and 1989 (Colorado Department of Natural Resources 1994). In Iowa, nesting plovers were observed in Pottawattamie and Harrison Counties during the 1940s, 50s, and 60s (Stiles 1940, Brown 1971). Incidental records exist for Wyoming, as well as Eddy County, New Mexico in 1964 (Bailey and Niedrich 1965). A record is reported for Douglas County Kansas in 1909. (Ridgeway 1919).

The current breeding range of the northern Great Plains population is similar to the previous records, with the following exceptions--piping plovers have not been reported in Wyoming or New Mexico since the initial records, and since 1996, Kansas has reported nesting activity along the Kansas River due to newly available habitat after scouring flows in 1993 (Busby et al. 1997). Additionally, in 1987 and 1988 piping plovers nested at Optima Reservoir, Oklahoma (these are the only known nesting records for Oklahoma) (Boyd 1991).

Plovers continue to nest in low numbers at Lake of the Woods, Minnesota (Minnesota Department of Natural Resources 1999). In North Dakota, plovers nest at various prairie alkali wetlands in Benson, Burke, Burleigh, Divide, Eddy, Emmons, Kidder, Logan, McHenry, McIntosh, McLean, Mountrail, Pierce, Renville, Sheridan, Stutsman, Ward, and Williams Counties, as well as sandbars and reservoir shorelines along the Missouri River (Service and North Dakota Game and Fish Department 1997, K. Kreil, U.S. Fish and Wildlife Service, pers. comm.). South Dakota nesting has generally been limited to the Missouri River, primarily below the Gavins Point and Ft. Randall Dams and on Lake Oahe (C.D. Kruse, U.S. Army Corps of Engineers, pers. comm.). Occasionally plovers have nested on Lake Sharpe (Missouri River), and have additionally been sighted on Lake Francis Case (Missouri River) during the nesting season but nesting has not been documented. In Colorado, nesting has been observed on various reservoirs of the Arkansas River during the 1990s (Plissner and Haig 1997, Nelson 2000). In Montana, plovers currently nest along the Missouri River, on Duck Creek Bay, Bear Creek Bay, Skunk Coulee, and the Big Dry Creek Arm of Fort Peck Reservoir, Nelson Reservoir, Bowdoin National Wildlife Refuge, and alkali wetlands in Phillips and Sheridan Counties (G. Pavelka, U.S. Army Corps of Engineers, pers. comm.; H. Pac, Montana Fish, Wildlife, and Parks, pers. comm.).

In Nebraska, piping plovers can still be found on sandbars along the Niobrara, Loup, and Platte Rivers, but habitat has been reduced on the Platte River. Before the closing of Kingsley Dam, Platte River sandbar habitat dynamics had already been affected by upstream impoundments and diversions (Peake et. al. 1985). By 1938, 30 percent of the in channel habitats were woody vegetated increasing to 57 percent in 1957 and close to 70 percent in 1983 (Peake et. al. 1985). Williams (1978) found channel widths also changed from wide-open channels to multiple narrow channels and attributed these changes to flow reductions from upstream dams and water withdrawals. These changes have resulted in degraded piping plover nesting habitat on the Central Platte with better conditions occurring on the Lower Platte (Ziewitz et al. 1992). Along the central reach of the Platte, this loss of habitat has forced most plovers to nest on sand and gravel mining spoil piles (Sidle and Kirsch 1993). However, since 1982 the Platte River Whooping Crane Maintenance Trust, Inc., has been reclaiming river habitat (sandbar restoration) on their property and on areas owned by the National Audubon Society, The Nature Conservancy and numerous individual landowners (Platte River Whooping Crane Maintenance Trust 2002). Most nesting on the Platte River currently occurs on the lower Platte, where encroachment is least advanced (Ziewitz et al. 1992). Lake McConaughy in Nebraska also supports nesting plovers on its sandy beaches (Peyton and Matteson 1999). In Iowa, Missouri River habitat has been lost due to channelization below Sioux City, leaving piping plovers to nest on industrial fly ash ponds in Woodbury and Pottawattamie Counties (D. Howell, Iowa Dept. of Natural Resources, pers. comm.). Plovers continue to nest in low numbers at Lake of the Woods, Minnesota (Minnesota Department of Natural Resources, 1999).

Breeding surveys in the early 1980s reported 2,137 to 2,684 adult plovers in the northern Great Plains/Prairie region, 28 adults in the Great Lakes region, and 1,370 to 1,435 adults along the Atlantic Coast (Haig and Oring 1985). In 1991 the first International Piping Plover Census was carried out with 2,032 adult piping plovers observed in the United States portion of the northern

Great Plains (Haig and Plissner 1993). In 1996, during the second International Census, 1,599 adult piping plovers were observed in the same area (Plissner and Haig 1997; numbers revised S. Haig pers. comm. 2002); a reduction of just more than 21 percent from 1991. Part of this reduction was likely an artifact of increased numbers of piping plovers nesting in Canada in 1996, due to high water levels in the United States (Plissner and Haig 1997). In 2001, during the third International Census, 1,981 adult piping plovers were observed in the same area (S. Haig pers. comm. 2002). Between 1991 and 2001 there was a reduction of 2.5 percent in the United States northern Great Plains. Between 1996 and 2001 there was a 23.9 percent increase. Again the fluctuations in numbers between 1996 and 2001 appear to reflect a relationship with the birds in prairie Canada but this time the relationship was inverse. Prairie Canada birds may have temporarily dispersed to recent unusually good habitat conditions in the United States northern Great Plains particularly the Missouri River.

After 1986, we formed two recovery teams, the Great Lakes/Northern Great Plains Piping Plover Recovery Team and the Atlantic Coast Piping Plover Recovery Team. In 1988 the Great Lakes and northern Great Plains (U.S. Fish and Wildlife Service 1988b) and Atlantic Coast (U.S. Fish and Wildlife Service 1988a) Recovery Plans were published. In 1994 the Great Lakes/Northern Great Plains Recovery Team began to revise the Recovery Plan for the Great Lakes/Northern Great Plains populations (U.S. Fish and Wildlife Service 1994). The 1994 draft included updated information on the species and was distributed for public comment. Subsequently, we decided that the recovery of these two inland populations would benefit from separate recovery plans. Separate recovery plans for the Great Lakes and northern Great Plains populations are presently under development. This critical habitat designation is primarily based on recovery needs identified in the 1994 Technical/Agency Draft Revised Recovery Plan, as well as information gained since that time, including present efforts to revise the recovery plan for the northern Great Plains population.

2.2 Critical Habitat

Critical habitat is defined in Section 3(5)(A) of the Act as – (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. The term “conservation” as defined in Section 3(3) of the Act, means “to use and the use of all methods and procedures which are necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary” (i.e., the species is recovered and removed from the list of endangered and threatened species).

Section 4(b)(2) of the Act requires that we base critical habitat designation on the best scientific and commercial data available, taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We may exclude areas from critical habitat designation if we determine that the benefits of exclusion outweigh the benefits of including the areas as critical habitat, provided the exclusion will not result in the extinction of the species. Within the geographic area occupied by the species (or, in this case, a breeding population), we will designate only areas currently known to be “essential to the conservation of the species.” Critical habitat should already have the features and habitat characteristics that are necessary to sustain the species. We will not speculate about what areas might be found to be essential if better information were available, or what areas may become essential over time. If information available at the time of designation does not show an area provides essential support for a species at any phase of its life cycle, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will not designate areas that do not now have the primary constituent elements, as defined at 50 CFR 424.12(b), that provide essential life cycle needs of the species.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize designation of critical habitat may not include all habitat eventually determined as necessary to recover the species. For these reasons, areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under Section 7(a)(1) and the regulatory protections afforded by Section 7(a)(2) jeopardy standard and the Section 9 take prohibition, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to this planning efforts calls for a different outcome.

In accordance with Section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12 in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations or protection. These include, but are not limited to--(1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing (or development) of offspring; and (5) habitats protected from disturbance or that are representative of the historic geographical and ecological distributions of a species.

3.0 Description of Alternatives

The Service considered four alternatives, including the No Action Alternative. The Action Alternatives are to designate critical habitat as ordered by the court. The Action Alternatives vary by the acreage and location of breeding habitat included in the critical habitat designation. In addition, we considered one potential alternative without thoroughly examining the impacts of its implementation.

3.1 Alternative Considered But Not Fully Evaluated

We considered an alternative designating the entire historical range of the northern Great Plains population of piping plovers, which would include all areas where plovers have been known to occur. Historical nesting reports are limited and it may be impossible to identify all areas within the historical range of the piping plover. Current habitat conditions across the northern Great Plains are likely altered compared to historic conditions, rendering certain sites unsuitable for piping plover use. In addition to the difficulty of determining all potential historical sites used by piping plovers, additional sites not considered to be essential to this species' survival or recovery would be included in this alternative. All areas known to have widely scattered piping plover sites, low population densities, or marginal habitat quality, including artificial areas such as sand pits and fly ash ponds, would be included. Much of the historical range does not meet part (I) of the definition of critical habitat stated above; therefore, we are not designating those areas as critical habitat. As a result, this alternative was removed from further consideration.

3.2 Alternative A. No Action Alternative.

Pursuant to NEPA and its implementing regulations (40 CFR 1502.14), we are required to consider the No Action Alternative. The No Action Alternative would basically maintain the status quo and there would be no designation of critical habitat. This alternative serves to delineate the existing environment and conditions that result from the listing of the species, without designation of critical habitat. Since the listing of the species as threatened, the piping plover has been protected under Section 7 of the Act by prohibiting Federal Agencies from implementing actions that would jeopardize the continued existence of the species. This protection under the Act is considered the baseline against which we evaluate the action alternatives described below. In addition, the No Action Alternative would ignore the legal requirement to designate critical habitat, where prudent, and would be non-responsive to the Court Order to designate critical habitat by March 15, 2002.

3.3 Action Alternatives

Each Action Alternatives includes designation of critical habitat in areas believed to contain the physical and biological features upon which the northern Great Plains population of piping plovers depends. The Act refers to these essential habitat features as "primary constituent elements."

We determined the primary constituent elements for the northern Great Plains population of piping plovers from research and survey observations published in peer reviewed articles and unpublished articles; data from known piping plover breeding locations from surveys conducted in North Dakota from 1987-2001, in Montana from 1986-2001, in Minnesota from 1982-2001, on the Missouri River from 1986-2001, in Nebraska from 1986-2001, in Kansas from 1996-2001, in Colorado from 1990-2001, and in Iowa from 1986-2001; the 1988 Great Lakes and Northern Great Plains Piping Plover Recovery Plan; the 1994 Technical/ Agency Review Draft Revised Recovery Plan for Piping Plovers Breeding on the Great Lakes and Northern Great Plains, and data from the 1991, 1996, and 2001 International Piping Plover Censuses. We also solicited information from knowledgeable biologists and reviewed the available information pertaining to habitat requirements of the species.

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited independent expert opinions from nine persons who are familiar with this species and its habitats, to peer-review the proposed critical habitat designation. Five responded by the end of the comment periods. They provided support for scientific credibility of the proposed rule, valuable information about piping plovers, their habitats, population biology, ecology, concerns for habitats left out of designation, and editorial comments. These comments were addressed in the final rule, and relevant data provided by the reviewers have been incorporated throughout the rule and this document.

Primary constituent elements for the northern Great Plains population of piping plovers are those habitat components (physical and biological) essential for the biological needs of courtship, nesting, sheltering, brood-rearing, foraging, roosting, intraspecific communication, and migration. The one overriding primary constituent element (biological) that must be present at all sites is the dynamic ecological processes that create and maintain piping plover habitat. Without this biological process the physical component of the primary constituent elements would not be able to develop. These processes develop a mosaic of habitats on the landscape that provide the essential combination of prey, forage, nesting, brooding and chick-rearing areas. The annual, seasonal, daily, and even hourly availability of the habitat patches is dependent on local weather, hydrological conditions and cycles, and geological processes.

The biological primary constituent element, i.e., dynamic ecological processes, creates different physical primary constituent elements on the landscape. These physical primary constituent elements exist on different habitat types found in the northern Great Plains, including mixosaline to hypersaline wetlands (Cowardin et al. 1979), rivers, reservoirs, and inland lakes. These habitat types or physical primary constituent elements that sustain the northern Great Plains breeding population of piping plovers are described as follows:

On prairie alkali lakes and wetlands, the physical primary constituent elements include--(1) shallow, seasonally to permanently flooded, mixosaline to hypersaline wetlands with sandy to gravelly, sparsely vegetated beaches, salt-encrusted mud flats, and/or gravelly salt flats; (2) springs and fens along edges of alkali lakes and wetlands; and (3) adjacent uplands 200 feet (61 meters) above the high water mark of the alkali lake or wetland.

On rivers the physical primary constituent elements include--sparsely vegetated channel sandbars, sand and gravel beaches on islands, temporary pools on sandbars and islands, and the interface with the river.

On reservoirs the physical primary constituent elements include--sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with the water bodies.

On inland lakes (Lake of the Woods) the physical primary constituent elements include-- sparsely vegetated and windswept sandy to gravelly islands, beaches, and peninsulas, and their interface with the water body.

It is the interactive nature of the biological primary constituent element or the dynamic ecological processes that create the physical primary constituent elements. On the northern Great Plains, the suitability of beaches, sandbars, shoreline, and flats as piping plover habitat types also is dependent on a dynamic hydrological system of wet-to-dry cycles. Habitat area, abundance and availability of insect foods, brood and nesting cover, and lack of vegetation are all linked to these water cycles. On rivers, one site becomes flooded and erodes away as another is created. More importantly the high flows on rivers create a complex of habitats for feeding, nesting, and brooding (Pavelka 2002 and Vander Lee et. al. 2002). This dynamic nature of rivers, as well as flow-management of rivers is important to long-term habitat creation and maintenance for piping plovers. On alkali lakes, the complex of different wetland types is especially important for providing areas for plovers feeding, nesting, and brooding in all years, as site availability cannot be predicted or selected at a given time, due to varying water cycles.

Biologists have noted a relationship appears to exist between availability of breeding habitat and wet-to-dry cycles. For example, in dry years, nesting areas on alkali wetlands lacking water may be unsuitable for piping plovers. In subsequent years as the basins refill there is an abundance of habitat. However, when the wet cycle peaks, there may be a lack of exposed shoreline habitats for nesting piping plovers. It is the dynamics of the changing cycles and the fact that these cycles can occur differently across the landscape that provides piping plover habitat over the long term.

Additionally, droughts on the Missouri River can produce more available habitat as reservoir levels drop. However, by the time the nesting season ends, vegetation has encroached on shoreline habitats. Subsequent high water years are necessary for the long term vegetative maintenance of shoreline habitats.

Continued reduced flows on rivers like the Platte and Missouri, either due to management or climatic conditions, can result in vegetative encroachment on exposed sandbars limiting available piping plover nesting habitat. However, increased flows or high flows during subsequent years provides for the long term maintenance of piping plover nesting habitat by scouring vegetation from sandbars and creating high sandbars.

These cycles are most likely interrelated throughout the northern Great Plains landscape. For example, if Nebraska rivers or alkali wetlands are flooded during the early part of the breeding season, there is some evidence that piping plovers move to other rivers like the Missouri, to renest. Similarly the abundance of piping plovers using the Missouri River (1988-1997) correlates strongly with alkali wetland piping plover populations during periods of below-average water levels in the riverine system (Licht 2002, in press). Licht (2002 in press) also found that once water levels on the Missouri River reached a certain point the relationship turned negative with river populations decreasing and alkali wetland populations increasing.

Because piping plovers evolved in this dynamic and complex system, and because they are dependent on it for their continued survival and eventual recovery, critical habitat boundaries incorporate natural processes inherent in the system and include sites that might not exhibit all appropriate habitat components in all years but have a documented history of such components over time and maintain the ability to develop and support those components.

Critical habitat for the northern Great Plains breeding population of piping plovers must meet the biological and physical primary constituent element requirements as defined above and are found on areas that--(1) are currently or recently used for breeding, or (2) were documented to have been occupied historically, or (3) are not specifically documented to have been occupied, but are deemed potential breeding habitat since these areas are part of a riverine system with documented nesting, and are within the historic geographic range, or (4) include habitat complexes, including wetland and adjacent upland areas, essential to the conservation of this species (50 CFR 424.13(d)). The critical habitat designation is effective year-round in order to conserve habitats. Therefore, an area that contains primary constituent elements is considered to be critical habitat even if these elements are temporarily obscured by snow, ice, or other temporary features. Areas found within the critical habitat boundaries that do not conform with the above discussion and the elements of this paragraph are not critical habitat. However, it is important to keep in mind that, because of the nature of the northern Great Plains, some of these designated habitats will not have these components every year but must have them over time to be considered critical habitat.

3.3.1 Alternative B. Designation of Critical Habitat as Identified in the Final Rule

Our preferred alternative is to finalize the designation of critical habitat as described in the final rule signed on September 11, 2002 and becoming effective 30 days following publication in the Federal Register. In developing this alternative, we reviewed the overall approach to the conservation of the species since the species' listing in 1985 (50 FR 50720); considered location data and habitat requirements for recovery and other information in the Recovery Plan and

revisions (Service 1988b and Service 1984), and examined the critical habitat units identified in the previous proposed (50 FR 31760); and new information received during the comment periods for the proposed rule (66 FR 31760; 66 FR 35580; 66 FR 67165; 67 FR 13123). The designation includes 19 critical habitat units containing prairie alkali wetlands, inland and reservoir lakes, totaling approximately 183,422 acres [74,228.4 hectares] and portions of 4 rivers totaling approximately 1207.5 river miles (1943.3 kilometers) in the States of Minnesota, Montana, Nebraska, North Dakota, and South Dakota.

Missouri River and Reservoirs: The Service mapped the Missouri River from Ft. Peck Reservoir, Montana to Ponca State Park, Nebraska. Two riverine reaches (a portion of Ft. Peck riverine reach and the reach from Ponca State Park, Nebraska to Plattsmouth, Nebraska), two reservoir reaches (Lake Sharpe and Lake Francis Case), and a portion of another reservoir (Ft. Peck) of the Missouri River were excluded from this proposal.

We did not propose the Ft. Peck riverine reach of the Missouri River from the Ft. Peck Dam to the confluence of the Milk River (RM 1712). This section is highly degraded and contains few sandbars due to sediments trapped behind the Ft. Peck Dam. Sandbar formation begins further downstream due to sediments transported from the Milk River. The upstream section that we have not proposed is not likely to develop the primary constituent elements needed for piping plover survival and recovery in the near future.

Although piping plovers have been documented as far south as Plattsmouth, Nebraska, on the Missouri River, very limited habitat currently exists for piping plovers below Ponca State Park, Nebraska. The Missouri River has little sandbar habitat in this reach due to the channelization of the river and bank stabilization projects which were created to support navigation. We are aware of efforts to restore some backwater areas along this reach which will likely create suitable habitat for the piping plover. We will continue to monitor these areas and may consider proposing them as critical habitat if they obtain the primary constituent elements needed for the piping plover in the future. Along the Iowa reach of the Missouri River plovers exist on fly ash sites adjacent to the river but these temporary habitats, which support few birds, are currently not believed to be in need of special management and, therefore, do not meet the definition of critical habitat.

Lake Sharpe and Lake Francis Case were excluded because they did not meet the definition of critical habitat. Lake Sharp has only supported a few pairs of birds on one beach since listing, and recreational impacts are significant on this 80-mile (128.7-km) stretch of the river. However, a small peninsula/island within the Lower Brule Sioux Tribe Reservation boundary is considered an area in need of special management. The Tribe and the Service believe this area if managed could help restore piping plovers to this reservation. Although this site is an area in need of special management, we cannot designate this area at this time because it was not in the proposed rule and thus was not subject to public comment. This area could be considered in a future amendment to the critical habitat designation.

On Lake Francis Case, a 107-mile (172.1-km) stretch from Big Bend Dam to Ft. Randall

information supplied during the comment period from the 2001 International Piping Plover Census indicating no plovers using this reservoir and information provided concerning water levels indicate that Lake Francis Case apparently does not now nor in the last 10 years, nor likely in the near future, provide significant nesting habitat for the piping plover.

In Montana, piping plovers have been found on the Dry Arm, Duck Creek Bay, Bear Creek Bay, and Skunk Coulee of Fort Peck Reservoir. We are not proposing the entire reservoir as plovers have never been reported on the western arm.

Including portions of the Missouri River that may not be occupied at this time is necessary because of the dynamic nature of the river. Sandbar/island habitats migrate up and down the riverine sections of the river resulting in shifts in the location of primary constituent elements. Mainstem reservoir areas also change depending on water level management. Piping plovers opportunistically respond to these shifts from year to year. The entire length of mainstem reservoirs was included even though small areas of reservoirs may never contain the primary constituent elements due to high banks and steep slopes. We did not exclude these areas because it would require a minimum of 2 years to collect data necessary to map at that detail.

Inland Lakes (Lake of the Woods): In Minnesota, piping plovers appear to key in on sandy points or spits in large lakes. Although many sandy beach/large lakes exist, piping plovers are attracted to the rare combination of windswept island or peninsula with a lack of adjacent tree cover. Incidental observations have never yielded nesting observations on large lakes such as Upper and Lower Red Lakes, or Lake Winnibigoshish. Therefore, we have limited our critical habitat proposal in Minnesota to three known sites on Lake of the Woods where the species has been observed nesting in more than 1 year. Zippel Bay on Lake of the Woods and Agassiz National Wildlife Refuge were not included because breeding pairs were only observed 1 year at these sites.

Nebraska Rivers

Portions of the Platte, Niobrara, and Loup Rivers are proposed for designation where piping plover nesting has been consistently documented since listing. Similar to the Missouri River, portions of the Platte River that are included in the proposed critical habitat designation may not be occupied in a given year, but designation is necessary because of the dynamic nature of the river. Sandbar habitats migrate up and down the rivers resulting in shifts in the location of primary constituent elements. The reach of the Platte River was reduced by 23 miles and the Niobrara River was reduced by 9 miles from the proposed rule. This decision was based on new information provided during the comment period by a peer reviewer. This information indicated that survey information for the excluded areas was historical and not recent (since listing).

The Elkhorn River was considered for this proposal but was not included at this time because there is limited documented nesting on this river. We do not consider the Elkhorn River to be essential at this time to the conservation and recovery of the northern Great Plains breeding population of the piping plover.

The shoreline along Lake McConaughy, Nebraska, was not included as critical habitat due to the existence of two, draft conservation management plans developed by the Central Nebraska Public Power and Irrigation District to satisfy a Federal Energy Regulatory Commission (FERC) relicensing requirement for Project No. 1417. The “Land and Shoreline Management Plan” and the “Management Plan for Least Terns and Piping Plovers Nesting on the Shore of Lake McConaughy” were developed in coordination and in agreement with the Service and the Nebraska Game and Parks Commission. Both plans are being implemented on an interim basis while awaiting FERC approval. We believe that implementation of these conservation management plans is consistent with piping plover recovery. Therefore, this area is not in need of special management and does not meet the definition of critical habitat. If conservation management plans are in place and meet the following three criteria, then we may exclude these areas from critical habitat. These conservation plans must--(1) provide a benefit to the species; (2) include implementation assurances; and (3) include features, such as an adaptive management plan, that will assure effectiveness. Therefore, despite the presence of nesting piping plovers at this site, it is eligible for exclusion from critical habitat on the basis of having conservation management plans that specifically address the conservation and recovery of the piping plover. We have been informed that FERC will be finalizing the plans in the near future.

Alkali Lakes and Wetlands: Wetlands--We mapped Montana/North Dakota alkali lakes and wetlands where breeding piping plovers have been observed in more than one year for the period of survey record (1987-2001 for North Dakota and 1986-2001 for Montana). The survey period encompassed both wet and dry cycles; therefore, the dynamic nature of prairie alkali lakes and wetlands, and the resulting shift in use by piping plovers of different habitat types, is reflected in the mapping. All alkali lakes and wetlands mapped exhibit one or more of the primary constituent elements. We did not include many areas that exhibited all of the primary constituent elements but breeding piping plovers were only observed once or were never observed. Our legal descriptions include all sections in which alkali lakes and wetlands and associated 200-foot (61-meter) upland habitat are found.

We had proposed the inclusion of Nelson Reservoir in the proposed rule. Nelson Reservoir, Bureau of Reclamation project, is a 4,559-acre (1,845-hectare) irrigation reservoir. During the comment period we received comments from the irrigation district and the Bureau of Reclamation requesting that Nelson Reservoir be withdrawn from the final designation of critical habitat. Both the Bureau of Reclamation and the Glasgow Irrigation District recognize the Memorandum of Understanding between the Malta and Glasgow Irrigation districts, U.S. Department of Interior, Bureau of Reclamation, U.S. Fish and Wildlife Service Ecological Services and Bowdoin National Wildlife Refuge that is in place and provides for protecting the piping plover and maintaining Nelson reservoir for its project purpose (irrigation) and recommended that consideration be given to not listing Nelson Reservoir as critical habitat.

We have reviewed the current M.O.U. for Nelson Reservoir between the agencies. We also are aware that each of the signatory agencies has worked toward and implemented management actions that are helping with the recovery of piping plovers in Montana. Many of the necessary recovery actions have been the result of the Bureau’s implementation of a 1990 biological

opinion issued to the Bureau of Reclamation on the operation of Nelson Reservoir. The Bureau of Reclamation believes that the adaptive management strategies identified in the MOU, along with their current management actions that includes the construction of several islands that they are meeting the conservation and recovery needs of the piping plover on Nelson Reservoir. We concur with the Bureau of Reclamation and are not proposing Nelson Reservoir for this designation. Since such management actions provide a benefit to the species, include implementation assurances and are adaptable to future management changes at Nelson Reservoir then this area is removed from the piping plover critical habitat designation.

The North Dakota Army National Guard (NDNG) owns portions of Lake Coe in North Dakota mapped as critical habitat in the proposed rule. The NDNG has completed the Camp Grafton Integrated Natural Resources Management Plan that includes Lake Coe. This plan provides a benefit for piping plovers on Lake Coe; includes implementation assurances and includes an opportunity for adaptive management. Therefore, the Camp Grafton portion of Lake Coe is not in need of special management and at the request of the NDNG, we have excluded the NDNG property on Lake Coe from critical habitat designation.

Colorado and Kansas Nesting Sites--Nesting areas on the Kansas River in Kansas were considered for possible inclusion as critical habitat but were not included because currently these sites are not considered essential and, therefore, do not meet the requirements of critical habitat. The Kansas River nesting occurred for the first time in 1996 and is suspected to have occurred because of habitat created by historical flood events (1993 and 1995). We believe that a return to more normal flows will eliminate nesting habitat on this river. In 4 years of documented nesting on the Kansas River there was one pair of plovers the first year and never more than four pairs. Additionally, productivity has been very limited. However, the U.S. Army Corps of Engineers (Corps) and the Service will be monitoring the Kansas River for piping plovers during the nesting season (Service 2000a). If nesting birds persist on the Kansas River, then we may reevaluate this river's contribution to conservation and recovery of the northern Great Plains breeding population of piping plovers and the need to designate critical habitat in the future.

Six different reservoirs (Neenoshe, Neegrande, Neeskah, John Martin, Adobe Creek, and Verhoeff) in Bent, Otero, and Kiowa Counties, Colorado, have been monitored for 10 years (1990-2000) and have not been able to sustain a stable population. There was a high of nine pairs in 1994 and 1995 and only four pairs in 2000. Predation and water level fluctuations are limiting factors affecting reproductive success. The Colorado Division of Wildlife is likely to continue monitoring the nesting plovers on the reservoir sites. In addition, the Colorado Department of Natural Resources approved a recovery plan for both the piping plover and interior least tern in 1994. Therefore, we are not proposing to include these areas in the critical habitat designation because currently we do not consider them essential and, therefore, do not meet the requirements of critical habitat.

Tribal Land--Six Tribes have critical habitat designated within the boundary of their reservations on the Missouri River including the Assiniboine and Sioux Tribes of Ft. Peck, Montana; the Standing Rock Sioux Tribe, and the Three Affiliated Tribes Mandan Hidatsa and Arikara Tribes

of the Ft. Berthold Reservation, in North Dakota; the Standing Rock Sioux Tribe, the Cheyenne River Sioux Tribe, and the Yankton Sioux Tribe in South Dakota and the Santee Sioux Tribe of Nebraska. Additionally, six Tribes have land or tribal trust land on submerged sites or sandbars/islands of the Missouri River. These tribes include--the Assiniboine and Sioux Tribes of Ft. Peck, Montana; the Standing Rock Sioux Tribe, and the Three Affiliated Tribes (Mandan Hidatsa and Arikara Tribes) of the Ft. Berthold Reservation, in North Dakota; the Standing Rock Sioux Tribe, the Cheyenne River Sioux Tribe, and the Yankton Sioux Tribe in South Dakota and the Santee Sioux Tribe of Nebraska. Indian trust lands are lands held by the United States in trust for either a tribe or an individual Indian. The Submerged lands Act, 43 U.S.C. sections 1301-1356, states that lands beneath navigable water held by the United States for the benefit of any tribe, band, or of Indians or for individual Indians is excepted from the confirmation and establishment of the States' rights confirmed by 43 U.S.C. section 1311. These habitats on the Missouri River within the boundary of a tribe, or held by the tribe, individual Indian or held in Trust by the United States are essential to the recovery of the piping plover. Additionally, the Turtle Mountain Tribe has mineral rights to land along the Missouri River in North Dakota that was taken by the Corps of Engineers for the Missouri River mainstem system. We also coordinated with three additional tribes with interest in lands on the Missouri River because of past treaties or other issues including the Rosebud Sioux and Oglala Sioux Tribes of South Dakota and the Winnebago Tribe of Nebraska.

The Lower Brule and Crow Creek Tribes also were consulted on the critical habitat designation. These reservation boundaries include areas on Lake Sharpe and Lake Francis Case. Both Reservoirs were excluded from designation. However, a small peninsula/island within the Lower Brule Sioux Tribe Reservation boundary is considered an area in need of special management. The Tribe and the Service believe this area if managed could help restore piping plovers to this reservation. Although this site is an area in need of special management, we cannot designate this area at this time because it was not in the proposed rule and thus was not subject to public comment. However, this area could be considered in a future amendment to the critical habitat designation.

The Ponca Tribe reservation boundary includes critical habitat designated along the Niobrara River but there are no trust lands within the critical habitat designation.

Piping plovers nest on sandbars and islands of the Assiniboine and Sioux Tribes of Ft. Peck. We believe that these Tribal lands are essential for the conservation of the piping plover and we have designated critical habitat for the piping plover on these lands of the Assiniboine and Sioux Tribes of Ft. Peck. However, the Ft. Peck Tribes have expressed concerns over designation of critical habitat on their lands because--(1) perception of burdens from the designation; (2) their view that it has never been established that the Endangered Species Act applies to Indian tribes and their natural resources, and (3) their plan to develop a Habitat Conservation Plan for species along the Missouri River including the piping plover. The Ft. Peck Tribal land within the high banks of the Missouri River will remain in the critical habitat designation. When the Ft. Peck tribes have completed a Habitat Conservation Plan the Service will review the plan for removal from the critical habitat designation.

We initiated coordination with all Tribes on this designation under the guidance of the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, and 512 DM 2, which requires us to coordinate with federally recognized Tribes on a Government-to-Government basis. We understand that some Tribes have concerns for the Service's government to government consultation responsibilities. We acknowledge the Tribes concerns but we believe we have carried out our responsibilities as best as we could under the constraints of limited staff and budgets and as court ordered time frames allowed. With the exception of the Turtle Mountain Tribe, which we only recently learned has mineral rights along the Missouri River, we have previously corresponded with Tribes by letters to Tribal Chairs and heads of Tribal Game and Fish Agencies on five different occasions and also facsimiles when the proposed rule was published.

Further information and communication have occurred with various Tribal and Bureau of Reclamation staffs at meetings to discuss piping plover critical habitat, including the 2001 Native American Fish and Wildlife Society Meeting in Billings, Montana, two Inter-Tribal Great Plains Fish and Wildlife Commission Meetings, and follow-up meetings with Yankton, Lower Brule, Fort Peck Assiniboine and Sioux, and Cheyenne River Tribes. Telephone communication also has taken place between Service Field staff and Tribal Game and Fish field staff.

We did not map critical habitat in sufficient detail to exclude all developed areas such as mainstem dam structures, buildings, marinas, boat ramps, bank stabilization and breakwater structures, row cropped or plowed agricultural areas, mines, roads and other lands (e.g., high bank bluffs along Missouri River reservoirs) unlikely to contain primary constituent elements essential for northern Great Plains piping plover conservation. These features will not themselves contain one or more of the primary constituent elements. Therefore, Federal actions limited to those features would not trigger a Section 7 consultation, unless they affect species or primary constituent elements in adjacent critical habitat.

3.3.2 Alternative C. Essential Habitat identified in the 1988 Great Lakes and Northern Great Plains Piping Plover Recovery Plan

This alternative would designate all areas described as essential in the 1988 Recovery Plan as critical habitat (Table 1, Appendix 10.2). The Service appointed a Great Lakes/Northern Great Plains Recovery Team which collaborated with State and Federal agencies, as well as other interested parties, to determine essential habitat for piping plovers. Additional sites have been identified as essential to the northern Great Plains population of piping plovers since 1988. Therefore, a designation of critical habitat that included only those areas listed as essential in 1988 would not conform to the requirement of the Act to consider all of the best available scientific and commercial information in designation of critical habitat.

One site was included in the 1988 Plan and was not included in either the 1994 Plan or the Proposed rule. Zippel Bay, on Lake of the Woods, Minnesota, was not included because breeding pairs were only observed for 1 year at this site.

3.3.3 Alternative D. Essential Habitat Identified in 1994 Technical/Agency Review Draft Revised Recovery Plan for Piping Plovers Breeding on the Great Lakes and Northern Great Plains

This alternative would designate all areas described as essential in the 1994 Technical/Agency Review Draft Revised Recovery Plan for Piping Plovers Breeding on the Great Lakes and Northern Great Plains (Table 1, Appendix 10.3). Additional information since the 1988 Plan led to an increased number of sites listed as essential for piping plover recovery in the 1994 Draft Plan. Areas described as essential were sites in which piping plovers were observed during the 1991 International Census for Piping Plovers. Subsequent surveys since 1994, including the 1996 and 2001 International Census for Piping Plovers, have increased our knowledge on the use of these, as well as other sites.

Sites from the 1994 Draft Plan not included in our proposed rule: sand pits along the Elkhorn, Loup, North Loup, and Platte Rivers, and shorelines of Lake McConaughy in Nebraska, two power plant sites in Iowa, three wetland sites in South Dakota, Lake Ilo National Wildlife Refuge in North Dakota, and four sites in Colorado.

Nebraska Rivers

The shoreline along Lake McConaughy, Nebraska, has been proposed for exclusions from the rule due to the existence of two, draft conservation management plans developed by the Central Nebraska Public Power and Irrigation District to satisfy a FERC relicensing requirement for Project No. 1417. The “Land and Shoreline Management Plan” and the “Management Plan for Least Terns and Piping Plovers Nesting on the Shore of Lake McConaughy” were developed in coordination and in agreement with the Service and the Nebraska Game and Parks Commission. Both plans are being implemented on an interim basis while awaiting FERC approval. The Service believes that implementation of these conservation management plans is consistent with piping plover recovery. If conservation management plans are in place and meet the following three criteria then we may consider exclusion of these areas for critical habitat. These conservation plans must--(1) provide a benefit to the species; (2) include implementation assurances; and (3) include features, such as an adaptive management plan, that will assure effectiveness. Therefore, despite the presence of nesting piping plovers at this site, it is eligible for exclusion from critical habitat on the basis of having conservation management plans which specifically address the conservation and recovery of the piping plover. However, if FERC should ultimately decide not to approve either or both of the aforementioned plans as currently drafted, the Service will need to reconsider whether the site should be excluded from the final rule for critical habitat designation.

Nesting areas on sand pits created by the aggregate mining industry along the Elkhorn, Loup, North Loup, South Loup and Platte Rivers were considered for possible inclusion as critical habitat. As some pits become vegetated and unsuitable as nesting habitat for piping plovers, other pits are concurrently dredged, providing a continual source of bare sand at mining sites. Also, the aggregate industry will continue to be required to avoid nesting locations during

operations.

The following organizations are currently involved in a voluntary Tern and Plover Conservation Partnership--the University of Nebraska Cooperative Extension, Nebraska Game and Parks Commission, Western Sand and Gravel, Mallard Sand and Gravel, Arps Gravel and Concrete, Overland Sand and Gravel, the Nebraska Environmental Trust, and the National Fish and Wildlife Foundation. This Partnership studies and protects interior least terns (*Sterna antillarum*), piping plovers and other birds within the Platte River system, Nebraska, in a manner that minimizes conflicts with private industry, and educates and involves local communities in this effort.

We have thoroughly reviewed the best available and scientific information available in regard to sandpits. Through the comment period we were provided additional information from the Nebraska Game and Parks Commission and various agencies that manage the sandpit areas. We have concluded that sandpits do not support the primary biological constituent element of dynamic ecological processes. Because sandpits are artificial and temporary in nature not all of the necessary biological and physical features that are essential to the conservation of the species are present at sandpits. We agree that sandpits have produced piping plovers over the years but it has not been without significant resource actions from managing agencies. Some biologists believe that the sandpits have been successful because of their location adjacent to the Platte River (Corn and Armbruster 1983 and E. Kirsch pers. comm. 2001). Birds nesting on sandpits appear to forage on river channel sites as well as on the sandpit shoreline, and occasionally appear to fly up to a mile between the sandpit nest site and the river channel foraging site (Corn and Armbruster 1993). Because sandpits are man-made, the sand environment is machine shifted regularly affecting vegetative growth and soil moisture. Soil moisture at sandpit sites is lower than on river channel sites and declines dramatically from the shoreline edge on sandpits. Corn and Armbruster (1983) found that soil moisture was the key factor in explaining the difference in invertebrate catch rates between rivers and sandpits. They also found invertebrate catch rates and densities are higher on river channel sites than on sandpits and invertebrate catch rates increased more dramatically over the summer on river channel sites than on sandpits. Without the dynamic ecological processes sandpit habitats are only temporary and marginal habitats for piping plovers. Once sandpits are abandoned, they become vegetated and too dense for piping plovers and the physical primary constituent elements are eliminated. Because sandpits do not meet the primary constituent elements and are not likely to meet the primary constituent elements in the future we have excluded them from designation.

Furthermore not all sand and gravel substrates at sand pits can be used by piping plovers. According to Sidle and Kirsch (1993) piping plovers will not nest on sand pits where the sand is steep sloped, near sieves, below slurry runoff, on roads, areas frequently used by heavy equipments, or in small areas covered by dense vegetation. Sidle and Kirsch (1993) further speculate that where sandbar habitat is available that plovers prefer sandbar habitats over sand pits. The percentage of birds using sand pits was slightly lower in 1988 than in other years because much sandbar habitat was available due to extremely low flows from May through late July of that year (Lingle 1993).

In addition to the lack of the primary constituent elements, the nature of sandpits is not conducive to long term management and recovery of the piping plover. We expect that mining will continue in areas of Nebraska as it has for years. However, eventually the mined areas are abandoned and usually sold for residential development. Usually within 1 and 3 years the abandoned mines re-vegetate and all value for piping plover nesting habitat is lost. Therefore, sandpits do not provide for piping plover recovery in the long term. This was recognized by the recovery plan as sandpits are not listed as essential habitat.

In addition, sand pits may not actually provide all of the primary constituent elements. Studies have shown that invertebrate densities are markedly higher in riverine habitat than sand pits (Corn and Armbruster 1993). The exclusion of sand pits from the critical habitat designation is not expected to result in the extinction of the northern Great Plains population of piping plovers. Although birds nest on these artificial habitats, predation rates are high and fledging ratios are low without intensive management.

Critical habitat is defined in Section 3 of the Act as--(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to conserve the species and (II) that may require special management considerations or protection. Since sand pits do not require special protection at this time, they do not meet the requirements of critical habitat.

Iowa Sites

Along the Iowa reach of the Missouri River plovers can be found adjacent to the river on fly ash sites of two power plants in Pottawattamie and Woodbury Counties. These temporary habitats, which support few birds, do not need special management at this time and, therefore, do not meet the requirements of critical habitat.

South Dakota Wetlands

Nesting areas on Waubay Lake in Day County, South Dakota were considered for possible inclusion as critical habitat. While limited shoreline habitat exists at these sites, few plovers have been observed breeding there since the 1991 International Census. In addition, exposed access roads of Lake Thompson and Lake Preston in Kingsbury County supported limited numbers of piping plovers in 1991. Plovers have not been observed at either lake since then, as shorelines are either heavily vegetated or inundated and unsuitable for piping plover nesting. Currently these sites are currently not essential to the conservation and recovery of the northern Great Plains breeding population of the piping plover.

North Dakota Site

Lake Ilo National Wildlife Refuge in Dunn County, North Dakota, was included as essential in the 1994 Draft Plan. Lake Ilo was created by construction of a dam on Spring Creek in 1939 and is a freshwater lake. In the late 1980s, the Service noted serious dam safety problems with Lake

Ilo Dam. Early in 1989, the dam was notched as a temporary emergency measure to lower the lake level and address dam failure issues. The dam notch and drought lowered the lake level, exposing a sparsely vegetated shoreline. The site was used by piping plovers during the time the Service lowered the lake level in preparation of repairing the dam. Once the original lake level was restored, piping plover breeding habitat was no longer available. We do not believe the site is essential to conservation of the species because it is a freshwater lake created by construction of a dam; the lake was only used by piping plovers when the water level was drawn down; we have no historic or other records of piping plovers breeding at the site; Lake Ilo is outside the species' historic range in North Dakota. Therefore, we do not propose to designate Lake Ilo NWR as critical habitat.

Colorado Nesting Sites

Nesting areas on six different reservoirs (Neenoshe, Neegrande, Neeskah, John Martin, Adobe Creek and Verhoeff) in Bent, Otero, and Kiowa Counties, Colorado, were considered for possible inclusion as critical habitat. Colorado reservoirs, monitored for 10 years (1990-2000), have not been able to sustain a stable population. There was a high of nine pairs in 1994 and 1995 and only four pairs in 2000. Predation and water level fluctuations appear to be limiting factors affecting reproductive success. The Colorado Division of Wildlife is likely to continue monitoring the nesting plovers on the reservoir sites. In addition, the Colorado Department of Natural Resources approved a recovery plan for both the piping plover and Interior least tern in 1994 (Colorado Department of Natural Resources 1994). Since additional special management or protection is not currently needed in Colorado, these sites do not meet the requirements for critical habitat.

3.4 Table 1. Summary of Actions by Alternative

ACTION	ALTERNATIVES ¹		
	ALTERNATIVE B (PROPOSED ALTERNATIVE)	ALTERNATIVE C (1994 DRAFT) ²	ALTERNATIVE D (1988 PLAN) ³
1. Designated sites of critical habitat:			
Colorado	—	Blue Lake Island	—
	—	Nee Grande Reservoir	—
	—	Nee Noshe Reservoir	—
	—	Upper Queens Reservoir	—
Iowa	—	Council Bluffs	—
	—	Salix Power Plant	—
Minnesota	Rocky Point	—	Rocky Point
	Pine and Curry Island	—	Pine and Curry Island
	Morris Point	Morris Point	Morris Point
	—	—	Zippel Bay
Montana	Bowdoin NWR	Bowdoin NWR	Bowdoin NWR
	Fort Peck Reservoir	Fort Peck Reservoir	Fort Peck Reservoir
	—	Nelson Reservoir	—
Montana (includes land within the Assiniboine and Ft. Peck Tribal Reservation on the Missouri	Missouri River: R.M. 1712-1586.6 Alkali wetland habitat in Sheridan County: Medicine Lake NWR Other wetlands	Missouri River: R.M. 1712-1586.6 Alkali wetland habitat in Sheridan County: Medicine Lake NWR Other wetlands	— — Alkali wetland habitat in Sheridan County: Medicine Lake NWR Other wetlands

ACTION	ALTERNATIVES ¹		
	ALTERNATIVE B (PROPOSED ALTERNATIVE)	ALTERNATIVE C (1994 DRAFT) ²	ALTERNATIVE D (1988 PLAN) ³
River)			
Nebraska (includes small portion of the Ponca Tribe Reservation on the Niobrara)	Niobrara River Platte River Loup River — — —	Niobrara River Platte River Loup River Lake McConaughy N. Loup Elkhorn River	Niobrara River Platte River Loup River — — —
North Dakota (includes land within the Standing Rock and Three Affiliated of the Ft. Berthold Reservations)	Missouri River: R.M. 1586.6-1231	Missouri River: R.M. 1586.6-1231	Missouri River: R.M. 1389.9-1270
North Dakota	Wetland habitat in the following counties: Benson, Burke, Burleigh, Divide, Eddy, Kidder, Logan, McHenry, McIntosh, McLean, Mountrail, Pierce, Renville, Sheridan, Stutsman, Ward, Williams	Wetland habitat in the following counties: Benson, Burke, Burleigh, Divide, Dunn, Eddy, Kidder, Logan, McHenry, McIntosh, McLean, Mountrail, Pierce, Renville, Sheridan, Stutsman, Ward, Williams	Wetland habitat in the following counties: Benson, Kidder, McHenry, McLean, Mountrail, Pierce, Sheridan, Stutsman, Ward
South Dakota(includes land within the Standing Rock,	Missouri River R.M. 1232.0-1072.3, R.M. 880.0-752.5 — —	Missouri River R.M. 1232-1072.3, R.M. 880- 752.5 Lake Thompson	Missouri River R.M. 1110-1088, R.M. 880- 752.5 —

ACTION	ALTERNATIVES ¹		
	ALTERNATIVE B (PROPOSED ALTERNATIVE)	ALTERNATIVE C (1994 DRAFT) ²	ALTERNATIVE D (1988 PLAN) ³
Cheyenne River, and Yankton Sioux reservations)	—	Lake Preston Waubay Lake	— —
2. <i>Estimated miles of river and acres of wetland habitat designated</i>	1,207.5 mi (1943.3 km) and 183,422 ac (74,228.4 ha)	1,536.2 mi (2,471.7 km) and 196,298.5 ac (79,440.9 ha)	732.4 mi (1,178.4 km) and 146,927.8 ac (59,460.9 ha)

¹ Does not include the No Action Alternative, since no areas would be designated as critical habitat. All actions are zero for this alternative.

² 1994 Technical/Agency Draft Revised Recovery Plan

³ 1988 Great Lakes and Northern Great Plains Piping Plover Recovery Plan

4.0 Description of the Affected Environment

The geographic area for the Proposed Action includes 183,422 acres (74,228.4 ha) and 1,207.5 river miles (1943.3 km) of critical habitat in Minnesota, Montana, North Dakota, South Dakota, and Nebraska, on Federal, State, Tribal, and private lands. Colorado and Wyoming also should be considered as part of the affected environment as water depletion activities in the Platte River watershed in these two States have the potential to impact critical habitat in Nebraska (See Section 5.5).

4.1 Physical Environment

Areas proposed as critical habitat occur within the northwestern mixed grasslands, northern mixed grasslands, central tall grasslands, Nebraska Sand Hills mixed grasslands, and central and southern mixed grasslands ecoregions (Ricketts et al. 1999).

Alkali wetlands included in the Proposed Action are located in Sheridan County, Montana, and Benson, Burke, Burleigh, Divide, Eddy, Kidder, Logan, McHenry, McIntosh, McLean, Mountrail, Pierce, Renville, Sheridan, Stutsman, Ward, and Williams Counties in North Dakota. These shallow, semi-permanent to permanent, “mixosaline” to “hypersaline” wetlands (Cowardin et al. 1979) generally are associated with the Missouri Couteau, a rolling to hilly moraine that crosses the Dakotas to southeastern Alberta.

Rivers included in the Proposed Action are the Missouri, Platte, Niobrara, and Loup. The Missouri River begins at the confluence of the Madison, Jefferson, and Gallatin Rivers near Three Forks, Montana. It flows southeasterly for approximately 2,400 miles (3,861.6 km) to just north of St. Louis, Missouri where it joins the Mississippi River. Along with its tributaries, the Missouri River drains a basin of over 529,000 square miles (338,560,000 acres) of land. Topography varies in the Missouri River Basin from the northern Rocky Mountains to the Great Plains and central lowlands. Important tributaries include the Yellowstone, Milk, Little Missouri, Cheyenne, White, James, Niobrara, and Platte Rivers. Six dams along the mainstem Missouri River are operated by the Corps for multiple purposes, including flood control, hydropower, navigation, recreation, and fish and wildlife conservation.

The Platte River system originates in Colorado with the North and South Platte Rivers and their tributaries. These flow eastward and join the Platte River near North Platte, Nebraska. The Platte then flows eastward to its confluence with the Missouri River near Plattsmouth, Nebraska. Topography varies from the Rocky Mountains to the Great Plains and central lowlands. The Platte and its principle tributaries, the North Platte and South Platte Rivers, have been affected by numerous water resource projects, which have significantly reduced streamflows (Simon and Associates 2000). The Loup River is a smaller tributary of the Platte, joining it near Columbus, Nebraska.

The Niobrara River originates just west of the Nebraska/Wyoming border and flows eastward until it joins the Missouri River near Niobrara, Nebraska. Seventy-six miles (122.3 km) have been designated as a National Scenic River by the National Park Service.

On Lake of the Woods in Minnesota, Rocky Point, Pine and Curry Island, and Morris Point are included in the Proposed Action. Rocky Point Wildlife Management Area is located just east of Arneson on Lake of the Woods and is managed by the Minnesota Department of Natural Resources. The Pine and Curry Island Scientific and Natural Area is managed by the Minnesota Department of Natural Resources and includes a sandy barrier island (Pine and Curry Island) and an adjacent peninsula (Morris Point) located at the mouth of the Rainy River on Lake of the Woods.

4.2 Fish and Wildlife

Several federally listed endangered species use habitat within the range of the Proposed Action, including the Interior least tern, pallid sturgeon (*Scaphirhynchus albus*), and whooping crane (*Grus americana*). One federally threatened species [bald eagle (*Haliaeetus leucopcephalus*)], and three candidate species [sickle-fin chub (*Macrhybopsis meeki*), sturgeon chub (*Macrhybopsis gelida*), scaleshell mussel (*Leptodea leptodon*)] are additionally found within the Proposed Action area.

In addition, many species of birds, fish, amphibians, reptiles, and mammals are found within the range of the Proposed Action that are considered threatened or endangered by the States of Montana, Nebraska, or South Dakota. North Dakota does not maintain an endangered species list.

Potentially affected State listed bird species include osprey (*Pandion haliaetus*), black tern (*Chlidonias niger*), Forster's tern (*Sterna forsteri*), Caspian tern (*Sterna caspia*), Franklin's gull (*Larus pipixcan*), and black-crowned night heron (*Nycticorax nycticorax*).

Potentially affected State listed fish species include the banded killifish (*Fundulus diaphanus*), blacknose shiner (*Notropis heterolepis*), finescale dace (*Phoxinus neogaeus*), lake sturgeon (*Acipenser fulvescens*), northern redbelly dace (*Phoxinus eos*), pearl dace (*Margariscus margarita*), sturgeon chub (*Macrhybopsis gelida*), and Trout-perch (*Percopsis omiscomaycus*).

A potentially affected State listed mammal is the river otter (*Lutra canadensis*).

Potentially affected State listed reptiles include the blanding's turtle (*Emydoidea blandingii*) and false map turtle (*Graptemys pseudogeographica*).

Shorebirds, waterfowl, migratory songbirds, furbearers, amphibians, and reptiles also use habitat within the Proposed Action area.

4.3 Human Environment

A wide diversity of human activities and land uses occur throughout or adjacent to the areas designated as critical habitat in Montana, North Dakota, South Dakota, and Nebraska. Uses include farming, livestock grazing, hydroelectric facilities, municipal water supply, and a variety of recreational activities. Private, State, Federal, and Tribal lands are included in the proposed action.

The designation of critical habitat directly affects only Federal Agencies. The Act requires Federal Agencies to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species. Individuals, organizations, States, local and Tribal governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding (for example, 404 permits from the U.S. Army Corps of Engineers, dam licensing or relicensing by the Federal Energy and Regulatory Commission, or funding of activities by the Natural Resource Conservation Service).

4.4 Tribal Lands

There are 16 Tribes located within the geographic range of the northern Great Plains population of the piping plover. The land within the geographic area occupied by the northern Great Plains breeding population of the piping plover is important to the cultural, ecological and economic resources of the Tribes located within this area. These Tribes include--the Blackfeet, and Assiniboine and Sioux Tribes of Ft. Peck in Montana, the Three Affiliated Tribes and Spirit Lake Tribe of North Dakota and the Standing Rock Tribe in North Dakota and South Dakota, Cheyenne River Sioux Tribe, Lower Brule Sioux Tribe, Crow Creek Sioux Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, and Yankton Sioux Tribe in South Dakota and the Santee Sioux Tribe, Omaha, Winnebago, and Ponca Tribes in Nebraska. There is a unique and distinctive relationship between the United States and Native American Governments, as defined by treaties, statutes, court decisions, and the Constitution of the United States. These treaties and agreements create a variety of legal responsibility by the United States toward American Indian Tribes and provide the basis for a government to government relationship. The Fort Laramie Treaty of 1868, between the United States and the Great Sioux Nation, recognizes the Missouri River's east bank as the boundary of the Great Sioux Reservation. The issues regarding treaties and litigation of property rights are of special importance to American Indian populations, but are beyond the scope of this EA and the designation of critical habitat.

Plovers have nested on alkali wetlands within the Blackfeet Reservation in Montana. However, nesting on the Blackfeet Reservation is rare and none of this habitat was proposed for critical habitat. Many Native American people live adjacent to the Missouri River and are dependent on the natural resources of the Missouri River Basin. However, proposed critical habitat on the

Missouri River includes reservoir beaches below the top of the maximum operating pool and on sandbars and islands in river reaches below dams. Land below the top of the maximum operating pool on the Missouri River reservoirs is in Federal ownership and managed by the Corps.

On the riverine reaches of the Missouri River, sandbars and islands in the river below the dams are claimed by the States of Montana, North Dakota, South Dakota, and private landowners in Nebraska. Six Tribes have land or tribal trust land on submerged sites or sandbars/islands of the Missouri River. These tribes include--the Assiniboiné and Sioux Tribes of Ft. Peck, Montana; the Standing Rock Sioux Tribe, and the Three Affiliated Tribes (Mandan Hidatsa and Arikara Tribes) of the Ft. Berthold Reservation, in North Dakota; the Standing Rock Sioux Tribe, the Cheyenne River Sioux Tribe, and the Yankton Sioux Tribe in South Dakota and the Santee Sioux Tribe of Nebraska. Indian trust lands are lands held by the United States in trust for either a tribe or an individual Indian. The Submerged lands Act, 43 U.S.C. sections 1301-1356, states that lands beneath navigable water held by the United States for the benefit of any tribe, band, or of Indians or for individual Indians is excepted from the confirmation and establishment of the States' rights confirmed by 43 U.S.C. section 1311. These habitats on the Missouri River within the boundary of a tribe, or held by the tribe, individual Indian or held in Trust by the United States are essential to the recovery of the piping plover. Additionally, the Turtle Mountain Tribe has mineral rights to land along the Missouri River in North Dakota that was taken by the Corps for the Missouri River mainstem system. The Ponca Tribe reservation boundary includes critical habitat designated along the Niobrara River, but there are no trust lands within the critical habitat designation.

The State of Montana recognizes that the Assiniboiné and Sioux Tribes of Ft. Peck have ownership of sandbars and islands in the Missouri River from the north shoreline of the Missouri River to the mid-channel of the river where their Reservation borders the river. The Reservation borders the Missouri River for 81.7 miles (131.5 km) in Missouri River Unit MT-2. Piping plovers nest on sandbars and islands of the Assiniboiné and Sioux Tribes of Ft. Peck. We believe that these Tribal lands are essential for the conservation of the piping plover and we are designating critical habitat for the piping plover on these lands of the Assiniboiné and Sioux Tribes of Ft. Peck.

Several Tribes not previously recommended but are presently living in the Missouri River Basin within or near the critical habitat designation and recognize the Ft. Laramie Treaty of 1868 as giving them certain rights include the Oglala Sioux Tribe and Rosebud Sioux Tribe in South Dakota. All of the Tribes in the Missouri River Basin are involved with natural resource management and several are already involved with the management of federally listed species. Tribes have participated in both the Missouri River Basin Association and the Missouri River Natural Resource Committee and many are actively involved with the Mni Sose Coalition.

Additionally, in 1999 the "Cheyenne River Sioux Tribe, Lower Brule Sioux Tribe, State of South Dakota Terrestrial Wildlife Habitat Restoration" was passed into Federal law under Title VI of the Water Resources Development Act. This Act will transfer much of the Federal land

and recreation areas in South Dakota managed by the Corps to the State and the Bureau of Indian Affairs (for the Cheyenne River and Lower Brule Sioux Tribes). Although land to be transferred in fee title is above the top of the maximum operating pool on Missouri River reservoirs, and not likely to have the primary constituent elements for piping plover critical habitat, under this legislation the Bureau of Indian Affairs will obtain, via easement, management authority to the water's edge, an area which is likely to contain the primary constituent elements. This transfer of lands is proposed to occur in 2002. A small portion of land within the Lower Brule Sioux Tribe Reservation is in need of special management but is not being designated at this time. Unfortunately, we cannot include it at this time because the public was not given opportunity to comment since Lake Sharpe was not included in the proposed rule. Because of the court-ordered deadline, we cannot repropose critical habitat at this time to include Lake Sharpe. However, we would like to include it later in an amendment if funding allows.

5.0 Environmental Consequences

This section reviews the expected environmental consequences of designating critical habitat for the piping plover under the proposed action and the environmental consequences of the No Action Alternative. Regardless of which alternative is chosen, in accordance with Section 7(a)(2) of the Act, Federal Agencies are required to review actions they authorize, fund, or carry out to determine the effects of Proposed Actions on federally listed species. If the Federal Agency determines that its action may adversely affect a listed species, it must enter into formal consultation with the Service. This consultation results in a biological opinion issued by the Service as to whether the Proposed Action is likely to jeopardize the continued existence of the species, which is prohibited under the Act.

A similar process would be required if critical habitat is designated. Federal Agencies would have to review their action for the effects on critical habitat, and would enter into Section 7 consultations with us on actions they determine may affect critical habitat. That consultation would result in a biological opinion as to whether the Proposed Action is likely to destroy or adversely modify designated critical habitat, which also is prohibited under the Act.

Activities that would destroy or adversely modify critical habitat are defined as those actions that “appreciably diminish the value of critical habitat for both the survival and recovery” of the species (50 CFR 401.02). Activities that would jeopardize the continued existence of a species are defined as those actions that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery” of the listed species (50 CFR 402.02). Given the similarity of these definitions, activities that would likely destroy or adversely modify critical habitat would almost always result in jeopardy to the species particularly when the action area is occupied by the piping plover. Therefore, implementation of the Proposed Action would result in no different environmental consequences when compared to the No Action Alternative in occupied areas.

Potential environmental consequences that may result from implementation of the No Action and Proposed Actions are discussed below. All impacts are expected to be indirect, as critical habitat designation does not in itself directly result in any alteration of the environment. Designation of critical habitat may in some cases provide some benefits to a species by alerting Federal Agencies to situations when Section 7 consultation is required. This may be particularly true in cases where the action would not result in direct mortality, injury or harm to individuals of a listed species (e.g., an action occurring within a critical habitat area when a species is not present). Another potential benefit is that critical habitat may help to focus Federal, State, Tribal, and private conservation and management efforts.

The northern Great Plains breeding population of piping plovers was listed as threatened in 1986. In Fiscal Years 1992 through 2000, we conducted at least 90 (88 of these included minor water depletion work done in Nebraska, Colorado, and Wyoming which involved the Platte River, where critical habitat has already been designated for the whooping crane) formal Section 7 consultations with other Federal Agencies to ensure that their actions are not likely to jeopardize the continued existence of the piping plover.

There are no areas designated as critical habitat that are considered unoccupied. Federal Agencies have been required to ensure that their actions do not jeopardize the continued existence of the piping plover since its listing in 1986. The prohibition against adverse modification of critical habitat is not expected to impose any additional restrictions to those that currently exist in areas of designated critical habitat. However, we do realize that some Federal Agencies have not fully recognized their responsibilities under the Act and may not have been initiating Section 7 consultation and may now recognize their need to do so.

As required by NEPA, this document is in part intended to disclose the programmatic goals and objectives of the Act. These objectives include protection of natural communities and ecosystems, minimization of fragmentation and promotion of the natural patterns and connectivity of wildlife habitats, promotion of native species and avoidance of the of non-native species introduction, protection of rare and ecologically important species and unique or sensitive environments, maintenance of naturally occurring ecosystem processes and genetic and structural diversity, and restoration of ecosystems, communities and recovery of species.

5.1 Piping Plover

The No Action Alternative would have no impacts on piping plovers because the protections resulting from their listing in 1986 and the associated requirements of Section 7 of the Act are already in place and duplicate of protections associated with critical habitat designation.

Benefits to piping plovers that may accrue from designation of critical habitat, under any of the action alternatives, would be the requirement under Section 7 of the Act that Federal Agencies review their actions to assess their effects on critical habitat. Designation of critical habitat also can help focus conservation activities for listed species by identifying areas essential to conserve the species. Designation of critical habitat also alerts the public, as well as land-managing

agencies, to the importance of these areas. These benefits are minimal, as most occurred at the time of listing.

Designating critical habitat does not, in itself, lead to the recovery of a listed species. The designation does not establish a reserve, create a management plan, establish numerical population goals, prescribe specific management practices (inside or outside of critical habitat), or directly affect areas not designated as critical habitat. Specific management recommendations for areas designated as critical habitat are most appropriately addressed in recovery and management plans, and through Section 7 consultation and Section 10 permits.

5.2 Fish, Wildlife, and Plants

The No Action Alternative would have no significant impacts on fish, wildlife or plants beyond those protections already in place as a result of listing of piping plovers in 1986 and associated requirements of Section 7 of the Act.

All of the action alternatives would have similar effects on fish, wildlife, and plants, in that there may be minimal additional impacts beyond those already considered in Section 7 consultation since the 1986 listing. The objectives of designating critical habitat include the protection of natural communities and ecosystems, minimization of fragmentation and maintenance and restoration of the natural landscape patterns and connectivity of wildlife habitats, promotion of native species and avoidance of non-native species introduction, protection of rare and ecologically important species and unique or sensitive environments, maintenance of naturally occurring ecosystem processes and genetic and structural diversity, and restoration of ecosystems, communities and recovery of species.

Fish, wildlife, and plants may indirectly benefit as a result of ecosystem protections provided through conservation of piping plovers and the associated requirements of Section 7 of the Act. As a result of critical habitat designation, Federal Agencies may be able to prioritize landowner incentive programs such as Conservation Reserve Program enrollment, grassland easements, and private landowner agreements that benefit piping plovers, as well as other fish, wildlife, and plant species. Critical habitat designation also may assist States and Tribes in prioritizing their conservation and land-managing programs.

5.3 Recreation

The No Action Alternative would have no impacts on the recreational use of the critical habitat beyond those already resulting from the 1986 listing of the piping plover and the associated requirements of Section 7 of the Act.

All of the action alternatives would have similar effects on recreation, in that, they may have minimal additional impacts beyond what we have already considered in Section 7 consultation since the 1986 listing. For example, the public may perceive beach closings and recreational vehicle restrictions due to critical habitat. In reality, the Corps already ropes off a limited number of sandbar and beach sites along the Missouri River each year to reduce human disturbance to piping plovers and least terns. The Corps also has temporarily restricted campground use after a plover nest was found.

In addition, we already conduct Section 7 consultations with Federal Agencies regarding recreation (e.g., we have consulted with the Corps on leasing 22 recreational areas to the State of South Dakota, and on other recreational activities on the Missouri River, including boat ramp construction and recreational use of sandbars, reservoir shorelines, and islands).

There may be perceived impacts on recreation during the Lewis and Clark bicentennial celebrations. Certain activities may be closely monitored due to the large number of people predicted to visit the northern Great Plains, although the potential recreational restrictions would likely occur from the initial listing of the piping plover and not from critical habitat.

The Service has addressed potential impacts associated with recreation on the Niobrara in the Addendum to the Economic Analysis. The National Park Service has consulted with the Service in the past on projects within the Niobrara National Scenic River. However, these consultations have not involved recreational activities on the river. Most recreation on the river occurs in the upper scenic section while most endangered species concerns are relative to the lower, lightly used, scenic section. Although the National Park Service is well aware of species concerns and the status of critical habitat designation for the plover, river managers do not anticipate new consultation activity involving the plover as a result of critical habitat designation for the species.

While there is some development along portions of the Niobrara River proposed as plover critical habitat, the Nebraska counties along this scenic river stretch have recently adopted consistent zoning regulations requiring a 200 foot setback from the river for new development¹. This setback requirement removes future construction activity along this river reach from the critical habitat area. Based on current land use restrictions and the consultation history along the Niobrara, it is not anticipated that critical habitat designation for the plover will impact the number or complexity of future consultations involving the National Park Service as a Federal nexus along the National Scenic River stretches of the Niobrara.

There have been concerns about the impacts of critical habitat designation on recreation and in some instances, tourism. The majority of concerns were expressed during the comment period from air boaters and all-terrain vehicle (ATVs) users. Most recreational activities have no Federal nexus and, therefore, will not be impacted by critical habitat designation. Use of piping

¹ Personal Communication, Resource Management Specialist, National Park Service, O'Neill, NB. June, 18, 2002.

plover critical habitat would only be affected if a Federal agency funds, authorizes, or carries out an action that will result in a level of human use that precludes successful piping plover breeding. In those cases we will work with the Federal agency (and the applicant) involved to protect potential breeding habitat while having as minimal an effect as possible on people's enjoyment of the areas. On non-Federal lands recreational activities will not be affected by the critical habitat designation. Access to private property is at the discretion of the landowners and critical habitat designation will have no effect upon property access issues. However, some recreational activities in active breeding areas have the potential to take birds as defined in section 9 of the Endangered Species Act. This provision of the Act was initiated upon listing of the species not the designation of critical habitat.

5.4 Agriculture

The No Action Alternative would have no impacts on agricultural activities, including farming and grazing, beyond those already resulting from the 1986 listing of piping plover and the associated requirements of Section 7 of the Act.

All of the action alternatives would have similar effects on farming and grazing, in that they may have minimal additional impacts beyond what we have already considered in Section 7 consultation since the 1986 listing. We anticipate these impacts will be minor because piping plovers are already considered in the regulation of activities affecting waters of the United States by the Corps under Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act. Additionally, grazing is generally compatible with piping plover habitat, as it reduces vegetation around alkali wetlands. The Corps has fenced off plover nesting areas along the Missouri River to minimize nest destruction but grazing and watering were allowed in adjacent areas.

The Service has addressed potential impacts associated with agriculture and irrigation in Nebraska in the Addendum to the Economic Analysis. Service biologists from Nebraska involved with consultation activity in the State cited no past or anticipated future consultations utilizing NRCS or USDA activities involving farmers in the State as a Federal nexus. The Service in Nebraska has engaged in one programmatic consultation with NRCS regarding potential impacts associated with the type of projects and assistance they offer. The result of this consultation was the Service concurring with NRCS's conclusion that their projects and technical assistance programs would have no net impacts on endangered species in the State.²

² Personal communication, Wildlife Biologist, U.S. Fish and Wildlife Service, Nebraska Field Office, Grand Island, Nebraska. June 18, 2002.

5.5 Water Management

The No Action Alternative would have no impacts on water management practices beyond those already resulting from the 1986 listing of piping plover and the associated requirements of Section 7 of the Act.

All of the action alternatives would have similar effects on water management, in that there are no likely additional impacts beyond what we have already considered in Section 7 consultation since the 1986 listing. Most water management activities involve Federal actions (e.g., actions under the Clean Water Act). Water depletions in Wyoming, Colorado, and Nebraska and their effects on piping plovers are thoroughly discussed in the Biological Opinion on Kingsley Dam (U.S. Fish and Wildlife Service 1997).

In addition, the Service has both informally and formally consulted with the Corps on operations of the Missouri River with regards to the piping plover. The Service also has consulted with Federal Agencies including the Bureau of Reclamation and Bureau of Indian Affairs on water development projects.

5.6 Socioeconomics

The No Action Alternative would have no impacts on the economic vitality of existing businesses within the area, business districts, the local economy, tax revenues, public expenditures, or municipalities beyond those impacts already resulting from the 1986 listing of the piping plover and the associated requirements of Section 7 of the Act.

We recognize a perception may exist within some segments of the public that any of the action alternatives designating critical habitat will severely limit property rights; however, critical habitat designation has no effect on private actions on private land that do not involve Federal approval or action. A critical habitat designation does not affect, a landowner undertaking a project on private land that involves no Federal funding or authorization. Critical habitat designation does not impose any new regulatory burdens on private land in addition to any imposed by the species' original listing. Private actions on private property, are exempted from the regulatory provisions of the Act unless the actions involve Federal funds, Federal authorizations, or other Federal nexus, or if the activity is likely to result in the take of piping plovers. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Prohibitions against the take of the species under section 9 of the Act are present despite whether or not critical habitat is designated. Although the legal definition of harm includes habitat modification, this applies only to the species and not to critical habitat. Critical habitat is not protected under the take prohibitions of section 9.

We have no data indicating designation of critical habitat for the piping plover will cause declines in property values. The designation is not expected to have a significant economic impact on a substantial number of small entities and landowners because it imposes very little, if any, additional restrictions on land use beyond those that may be required as a result of listing the piping plover. Only activities taking place on their property having some sort of Federal nexus could potentially be affected and experience has shown that most of those activities are easily modified or rarely warrant enough concern to trigger formal section 7 consultation. Because the piping plover is a federally protected species, landowners are prohibited from taking the species, under the Act. Such requirements remain unaffected by the designation of critical habitat. Therefore, proposed project modifications would be attributable to the presence of the piping plover on a landowner's property and not due to the presence of critical habitat.

The Economic Analysis of Critical Habitat Designation for the Northern Great Plains Breeding Population of the Piping Plover and its Addendum found that over the next 10 years total annual consultation costs associated with activities potentially affecting the piping plover will be \$2,347,800.³ Of this total, it is estimated that a maximum of approximately \$32,600 per year in consultation costs will be due to designation of critical habitat for the piping plover. It is this amount (\$32,600) that would be avoided were there no critical habitat designation for the species.

The estimated number of consultations and associated costs presented here are suggestive. The actual number of consultations, which may be lower or higher than these estimates, depends on future economic activity within the areas of critical habitat, as well as on individual decisions made by Federal, tribal, State, municipal, and private landowners. In addition, the analytic approach used to derive the estimated number of consultations cannot account for unknown or unforeseen activities and projects. Therefore, the estimates presented here represent reasonable approximations and not firm predictions.

We conducted an extensive public outreach program, including five public meetings, presentations and exhibits at conferences, a website, and press releases to help explain exactly what this critical habitat designation means. We recognize that there are private actions on private lands that involve Federal actions; however, there should already be Section 7 consultations taking place in these situations. We also recognize that Federal Agencies may not carry out this responsibility in all cases.

Conversely, any additional conservation of natural ecosystems that may be provided by critical habitat may provide economic benefits in attracting nature enthusiasts, such as bird watchers, to the area. The Lewis and Clark Bicentennial celebrations may be uniquely affected by the

³ Total consultation costs are for all parties involved in the consultations. Of the \$2,347,800 total, approximately 34.5 percent (\$810,000) would be costs to the Service, 40.0 percent (\$939,000) would be costs to the action agencies, and 25.5 percent (\$599,000) would be costs to private applicants.

designation of critical habitat. There may be a perceived loss of income by local businesses due to decreased visitation from perceived restrictions. Conversely, there may be a perceived increase of income due to the draw of observing an endangered species.

The addendum to the Economic Analysis of Critical Habitat Designation for the Northern Great Plains Breeding Population of the Piping Plover addresses more on the potential benefits of proposed critical habitat (Appendix 10.5).

5.7 Archeological and Cultural Resources

The No Action Alternative would have no impacts on archaeological and cultural areas beyond those already resulting from the 1986 listing of piping plover and the associated requirements of Section 7 of the Act.

All of the action alternatives would have similar effects on archeological and cultural sites, in that there are not likely to be any additional impacts beyond what we have already considered in Section 7 consultation since the 1986 listing. For example, the Corps already considers piping plovers in Section 7 consultations on bank protection programs for Indian burial sites and we would expect the same on other projects affecting Tribal cultural resources. While designation of critical habitat is expected to have no direct impacts on these resources, an indirect beneficial effect may be the potential increased protection of these sites and resources within critical habitat if a Federal action is proposed.

The affected area is rich with archaeological and cultural resources including those associated with historic Lewis and Clark sites or Tribal lands. These sites might attract additional use due to critical habitat designation, which have been mentioned in the socioeconomic section.

5.8 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629 (1994), directs Federal Agencies to incorporate environmental justice in their decision making process. Federal Agencies are directed to identify and address as appropriate, any disproportionately high and adverse environmental effects of their programs, policies, and activities on minority or low-income populations.

No environmental justice issues exist for any of the alternatives. None of the alternatives would create any environmental pollution. The American Indian populations living on area reservations and in the vicinity of the sites proposed as critical habitat are the only low income or minority group identified in the impacted area. These populations will not be displaced or disproportionately negatively affected in any other way by the proposed action or any alternative.

5.9 Cumulative Impact

Designation of critical habitat for the piping plover in presently occupied areas will add minimal incremental impacts when added to other past, present, and reasonably foreseeable future actions.

We expect the impacts to be relatively small because in addition to the piping plover, several listed and candidate species also may occur in the area. These include the interior least tern, bald eagle, whooping crane, and pallid sturgeon. In addition there is critical habitat designated for the whooping crane within a portion of the piping plover critical habitat. Federal Agencies are required to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of the listed species, or destroy or adversely modify designated critical habitat in accordance with Section 7(a)(2) of the Act.

Activities that adversely modify critical habitat are defined as those actions that “appreciably diminish the value of critical habitat for both the survival and recovery” of the species (50 CFR 401.02). Activities that jeopardize a species are defined as those actions that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery” of the listed species (50 CFR 402.02). According to these definitions, activities that destroy or adversely modify critical habitat would almost always jeopardize the species. Therefore, designation of critical habitat has rarely resulted in greater protection than that afforded under Section 7 by the listing of a species. Section 7 consultations apply only to actions with Federal involvement (i.e., activities authorized, funded, or conducted by Federal Agencies), and do not impact activities strictly under State or private authority. In practice, the designation of critical habitat for the piping plover will likely provide little additional benefits to the species in presently occupied areas because there are functioning program activities already alerting Federal Agencies and the public of endangered species concerns. However, we recognize that Federal Agencies may not carry out their Section 7 responsibilities in all cases.

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as part of critical habitat. We cannot exclude such areas from critical habitat if such exclusion would result in the extinction of the species concerned. We utilized the economic analysis, its addendum and our analysis of other relevant impacts, and considered all comments and information submitted during the public hearing and comment period, to make a final critical habitat designation.

5.10 Table 2. Summary of Environmental Consequences by Alternative

IMPACTS	ALTERNATIVES			
	ALTERNATIVE A. NO ACTION	ALTERNATIVE B. PROPOSED ACTION	ALTERNATIVE C	ALTERNATIVE D
Piping Plover	No change to existing situation.	May be minimal beneficial impacts beyond those associated with the 1986 listing. For example, designation of critical habitat can help focus conservation activities for listed species.	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1).	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1)
Fish, Wildlife, and Plants	No change to existing situation.	May be minimal beneficial impacts beyond those associated with the 1986 listing. For example, Federal Agencies may be able to prioritize landowner incentive programs such as Conservation Reserve Program enrollment, grassland easements, and private landowner agreements that benefit many species.	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1).	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1)
Recreation	No change to existing situation.	May be minimal impacts beyond those associated with the 1986 listing. For example, the public may Perceive beach closings and recreational vehicle restrictions, although no additional restrictions Will likely occur beyond those associated with the 1986 listing.	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1).	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1).

IMPACTS	ALTERNATIVES			
	ALTERNATIVE A. NO ACTION	ALTERNATIVE B. PROPOSED ACTION	ALTERNATIVE C	ALTERNATIVE D
Agriculture	No change to existing situation.	May be minimal impacts beyond those associated with the 1986 listing. For example, their may be perceptions of grazing and watering restrictions, although no additional restrictions will likely occur beyond those associated with the 1986 listing.	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1).	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1)
Water Management	No change to existing situation.	No likely additional impacts beyond those associated with the 1986 listing.	No likely additional impacts beyond those associated with the 1986 listing.	No likely additional impacts beyond those associated with the 1986 listing.
Socioeconomic	No change to existing situation.	May be minimal impacts beyond those associated with the 1986 listing. For example, we recognize that there are private actions on private lands that involve Federal actions; however, there should already be Section 7 consultations taking place in these situations. We Also recognize that Federal Agencies may not carry out this responsibility in all cases; therefore, there may be an increase in the number of Section 7 consultations.	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1).	Impacts are similar to that of Proposed Action. Difference in the number of locations potentially affected (see Table 1)

IMPACTS	ALTERNATIVES			
	ALTERNATIVE A. NO ACTION	ALTERNATIVE B. PROPOSED ACTION	ALTERNATIVE C	ALTERNATIVE D
Archaeological and Cultural	No change to existing situation.	No likely additional impacts beyond those associated with the 1986 listing.	No likely additional impacts beyond those associated with the 1986 listing.	No likely additional impacts beyond those associated with the 1986 listing.
Environmental Justice	No change to existing situation.	No impacts.	No impacts.	No impacts.

6.0 Council on Environmental Quality Analysis of Significance

Under CEQ 40 CFR Part 1508.27, the determination of “significantly” requires consideration of both context and intensity.

6.1 Context

Based upon our responses from agencies and the public any effects, although long-term, will not be national, only regional and mostly local in context; and any that occur are expected to be small.

6.2 Intensity

Intensity is defined by CEQ as referring to the severity of impact. The following 10 points identified by CEQ were considered in evaluating intensity:

1. We foresee minimal additional negative impacts beyond what we have already considered in Section 7 consultation since the 1986 listing. There may be perceived negative impacts but we are carrying out a public outreach program, which should address and minimize most of those misconceptions. There may be some beneficial impacts to the environment.
2. This designation will not have a discernable impact on human safety.
3. Although several areas designated as critical habitat are in proximity to historic and cultural sites, parklands, farmland, wetlands, scenic rivers and ecologically critical areas, minimal adverse impacts will occur to these areas; in fact, the ecologically critical areas are expected to only benefit from some of the perceptions attached to this designation.
4. There is a perception by some segments of the public that critical habitat designation will severely limit property rights; however, critical habitat designation has no effect on private actions on private land that do not involve Federal approval or action. Therefore, we conclude that this misconception will be clarified by the Final Rule and will result in this designation not being highly controversial.
5. The Service has designated critical habitat for other species in the recent past and we are familiar with the associated effects. Therefore, we anticipate minimal effects to the human environment and we are certain this action does not involve any unique or unknown risks.
6. This designation of critical habitat is not expected to set any precedents for future actions with significant effects or represent a decision in principle about a future consideration because critical habitat has been designated before for other species, as required by law.

7. This designation of critical habitat will be additive (cumulative) to critical habitat that has been, and will be, designated for other species. However, it is the Service's conclusion that the beneficial and adverse impacts of any and all critical habitat designations are small and, therefore, insignificant due to the existing impacts, both beneficial and adverse, already resulting from the listing of the species involved.
8. This designation will have minimal adverse effects to National Register of Historic Places or other cultural sites.
9. Most impacts from this designation of critical habitat are will be beneficial to endangered and threatened species, particularly the piping plover. Designation of critical habitat can help focus conservation activities for listed species by identifying areas essential to conserve the species. Designation of critical habitat also alerts the public, as well as land-managing agencies, to the importance of these areas. These benefits are minimal, as most occurred at the time of listing.
10. This designation of critical habitat will not violate any Federal, State, or local laws or requirements imposed for the protection of the environment.

7.0 Contacts and Coordination With Others

We have coordinated with States, Tribes, Federal Agencies, and other Interested Parties through letters, formal and informal presentations, and telephone calls. North Dakota's Governor's Office, Congressional Delegation Staff in Bismarck, North Dakota, and State agencies were contacted by the North Dakota Field Office (NDFO). The NDFO and refuge staff coordinated with private landowners in MT and ND by letters and "chili feed" open houses. The NDFO also coordinated with the Twin Cities Field Office in Minneapolis, Minnesota, Minnesota Department of Natural Resources, the Nature Conservancy, North Dakota Game and Fish Department, and North Dakota National Guard. Staff from the Billings suboffice of the Montana Field Office contacted Montana Fish, Wildlife and Parks, the Bureau of Land Management, the Bureau of Reclamation, and affected irrigation districts. South Dakota Field Office (SDFO) staff coordinated with the South Dakota Department of Game Fish and Parks, the U.S. Army Corps of Engineers, and Bureau of Indian Affairs. The SDFO also coordinated with the Manhattan, Kansas, Field Office, Kansas Department of Wildlife and Parks, the Iowa Department of Natural Resources, and the Colorado Division of Wildlife. The Grand Island Field Office (GIFO) coordinated with Central Nebraska Public Power and Irrigation District, the National Park Service, and FERC. The GIFO also coordinated with Nebraska Interagency Group, Nebraska Game and Parks Commission, U.S. Army Corps of Engineers, Nebraska Department of Environmental Quality, NRCS, and Nebraska Department of Roads. We also met several times with the Great Plains Tribal Game and Fish Commission and several Tribal Game and Fish Departments.

The Deputy Regional Director of Region 6 of the Service sent letters to States, Tribes, Federal agencies, NGOs, and others informing them about how habitat management plans are considered when designating critical habitat and Service actions on the designation of critical habitat for the northern Great Plains breeding population of the piping plover.

7.1 List of Agencies, Organizations, and Persons to Whom Copies of This Environmental Assessment Were Sent or Contacted

The following is a list of individuals, organizations, and public agencies contacted concerning development of this Environmental Assessment and the proposed rule to designate critical habitat for the northern Great Plains breeding population of piping plovers. Each of these individuals also will be notified of the publication of the final rule:

Federal Agencies

Department of Defense

- U.S. Army Corps of Engineers
 - Lake Sakakawea Manager
 - Lake Oahe Manager
 - Ft. Randal Manager
 - Gavins Point Project Manager
 - Regulatory Office, Bismarck, North Dakota
 - Omaha District, Yankton, South Dakota, and Omaha, Nebraska

North Dakota National Guard

Department of the Interior

- Bureau of Indian Affairs
- Bureau of Land Management
 - Phillips Resource Area
- Bureau of Reclamation
 - Montana Area Office
 - Dakotas Area Office

Fish and Wildlife Service

- Arrowwood National Wildlife Refuge
- Audubon National Wildlife Refuge
- Bowdoin National Wildlife Refuge
- Charles M. Russell National Wildlife Refuge
- Chase Lake Prairie Project
- Des Lacs National Wildlife Refuge
- Devils Lake Wetland Management District
- J. Clark Salyer National Wildlife Refuge
- Kulm Wetland Management District
- Lostwood National Wildlife Refuge
- Medicine Lake National Wildlife Refuge
- Upper Souris National Wildlife Refuge
- Private Lands Coordinator

Montana, North Dakota, South Dakota, Nebraska
Law Enforcement Division

Montana, North Dakota, South Dakota, Nebraska

National Park Service
Department of Agriculture
Natural Resources Conservation Service
Farm Service Agency
Department of Transportation
Federal Highway Administration

Federal Congressional Delegation

Colorado

Office of Senator Wayne Allard
Office of Senator Ben Nighthorse Campbell
Office of Representative Diana De Gette
Office of Representative Mark Udall
Office of Representative Scott McInnis
Office of Representative Bob Schaffer
Office of Representative Joel Hefley
Office of Representative Thomas Tancredo

Iowa

Office of Senator Chuck Grassley
Office of Senator Tom Harkin
Office of Representative James A. Leach
Office of Representative Jim Nissle
Office of Representative Leonard L. Boswell
Office of Representative Greg Ganske
Office of Representative Tom Latham

Kansas

Office of Senator Sam Brownback
Office of Senator Pat Roberts
Office of Representative Jerry Moran
Office of Representative Jim Ryun
Office of Representative Dennis Moore
Office of Representative Todd Tiahrt

Minnesota

Office of Senator Mark Dayton
Office of Senator Paul Wellstone
Office of Representative Gil Gutknecht
Office of Representative Mark R. Kennedy
Office of Representative Jim Ramstad
Office of Representative Betty McCollum
Office of Representative Martin Olav Sabo
Office of Representative William Luther

Office of Representative Collin C. Peterson
Office of Representative James L. Oberstar

Montana

Office of Senator Max Baucus
Office of Senator Conrad Burns
Office of Representative Dennis Rehberg

Nebraska

Office of Senator Chuck Hagel
Office of Senator Ben Nelson
Office of Representative Doug Bereuter
Office of Representative Lee Terry
Office of Representative Tom Osborne

North Dakota

Office of Senator Kent Conrad
Office of Senator Byron L. Dorgan
Office of Representative Earl Pomeroy

South Dakota

Office of Senator Tom Daschle
Office of Senator Tim Johnson
Office of Representative John Thune

Tribes

Assiniboiné and Sioux Tribes of Ft. Peck
Blackfeet
Cheyenne River
Crow Creek
Lower Brule
Oglala
Omaha
Ponca
Rosebud
Santee
Spirit Lake
Standing Rock
Three Affiliated Tribes
Turtle Mountain
Winnebago
Yankton

State Agencies

Colorado Division of Wildlife
Iowa Department of Natural Resources
Kansas Biological Survey
Kansas Farm Bureau
Kansas Parks and Wildlife
Kansas Water Office
Minnesota Department of Natural Resources
Montana Fish, Wildlife, and Parks
Nebraska Dept. of Environmental Quality
Nebraska Dept. of Natural Resources
Nebraska Dept. of Roads
Nebraska Federal Highway Administration
Nebraska Game and Parks Commission
North Dakota Game and Fish Department
North Dakota Agriculture Department
North Dakota Land Department
North Dakota Parks and Recreation Department
North Dakota Department of Transportation
South Dakota Department of Game, Fish, and Parks

Governors

Minnesota Jesse Ventura
Montana Judy Martz
Nebraska Mike Johanns
North Dakota John Hoeven
South Dakota William Janklow

State Legislative Members

Minnesota

Senator LeRoy A. Stumpf
Representative Maxine Penas

Montana

Senators

Sam Kitzenberg, Linda J. Nelson, Walter L. McNutt

Representatives

Donald Hedges, Betty Lou Kasten, Jeff Pattison, Frank J. Smith, Karl
Waitschies

Nebraska

Senators

Ray Aguilar, Curt Bromm, Jon Bruning, Carroll Burling, Jim D.
Cudaback, Douglas Cunningham, Merton Dierks, Leo "Pat" Engel, Philip
Erdman, Paul Hartnett, Carol Hudkins, Ray Janssen, Jim Jones, Bob
Kremer, Doug Kristensen, Richard N. McDonald, Jennie Robak, Ed J.

Schrock, Robert R. Wehrbein

North Dakota

Senators

John Andrist, Bill Bowman, Randel Christmann, Dwight Cook, Dick Dever, Robert Erbele, Michael Every, Layton Freeborg, Ralph Kilzer, Jerry Klein, Aaron Krauter, Karen Krebsbach, Ed Kringstad, Stanley Lyson, Dave Nething, David O'Connell, Randy Schobinger, Ken Solberg, Bob Stenehjem, Ben Tollefson, Steven Tomac, Herb Urlacher, Terry Wanzek, Darlene Watne, Larry Bellew,

Representatives

James Boehm, Rex Byerly, Ron Carlisle, Audrey Cleary, Duane DeKrey, Jeff Delzer, Mark Dosch, David Drovda, April Fairfield, Rod Froelich, Glen Froseth, Pat Galvin, Jane Gunter, C.B. Haas, Lyle Hanson, Bob Hunsaker, Dennis Johnson, George Keiser, RaeAnn Kelsch, Keith Kempenich, James Kerzman, Frank Klein, Matthew Klein, Lawrence Klemin, William Kretschmar, Joe Kroeber, John Mahoney, Andrew Maragos, Bob Martinson, Lisa Meier, Jon Nelson, Kenton Onstad, Chet Pollert, Todd Porter, Clara Sue Price, Dennis Renner, Earl Rennerfeldt, Dan Ruby, Arlo Schmidt, Bob Skarphol, Dorvan Solberg, Elwood Thorpe, Mike Timm, John Warner, Dave Weiler, Robin Weisz, Janet Wentz, Ray Wikenheiser, Dwight Wrangham

South Dakota

Senators

Kenneth Albers, Eric Bogue, Patricia de Hueck, Bob Drake, Robert Duxbury, Jim Hutmacher, Garry Moore, J. E. Putnam, and John Reedy

Representatives

Julie Bartling, Michael Broderick, Jr., Jarvis Brown, Quinten Burg, Judy Clark, Jay Duenwald, Cooper Garnos, Margaret Gillespie, Dale Hargens, Jean Hunhoff, Ted Klaudt, Frank Kloucek, Matthew Michels, Jeff Monroe, Sam Nachtigal, B.J. Nesselhuf, Bill Van Gerpen, and Thomas Van Norman

County Commissioners

Minnesota

County Commissioner from Lake of the Woods

Montana

County Commissioners from the following counties--Garfield, McCone, Phillips, Richland, Roosevelt, Sheridan, Valley

Nebraska

County Commissioners from the following counties--Boyd, Brown, Buffalo, Butler, Cass, Cedar, Colfax, Dawson, Dixon, Dodge, Douglas, Gosper, Hall, Hamilton, Holt, Howard, Kearney, Keya Paha, Knox, Merrick, Nance, Phelps, Platte, Polk, Rock, Sarpy, Saunders

North Dakota

County Commissioners from the following counties--Benson, Burke, Burleigh, Divide, Dunn, Eddy, Emmons, Kidder, Logan, McHenry, McIntosh, McKenzie, McLean, Mercer, Morton, Mountrail, Oliver, Pierce, Renville, Sheridan, Sioux Stutsman, Ward, Williams

South Dakota

County Commissioners from the following counties--Bon Homme, Brule, Buffalo, Campbell, Charles Mix, Clay, Corson, Dewey, Gregory, Hughes, Hyde, Lyman, Potter, Stanley, Sully, Walworth, Yankton, Union, Ziebach

Private Groups

Alfalfa Irrigation District
Dodson Irrigation District
Fort Belknap Irrigation District
Glasgow Irrigation District
Harlem Irrigation District
Malta Irrigation District
Paradise Irrigation District
Zurich Irrigation District
Baker University
Central Nebraska Public Power and Irrigation District
Defenders of Wildlife
Falkirk Mining Company
Jeffrey Energy Center
Montana Stockgrowers Association
National Audubon Society
 North Dakota Office
 Nebraska Office
The Nature Conservancy
 Regional Office, Minneapolis, Minnesota
 Cross Ranch Nature Preserve
 Piping Plover Biologist
 Nebraska Office
Nebraska Cattlemen Association
Nebraska Farm Bureau
Nebraska Public Power District
North Dakota Farm Bureau
North Dakota Farmers Union
North Dakota Stockman's Association
Platte Whooping Crane Maintenance Trust, Inc.
Sierra Club
 North Dakota Chapter
 Nebraska Dakota Chapter
South Dakota Farm Bureau
University of Nebraska-Lincoln Extension

The Wildlife Federation
North Dakota Chapter
The Wildlife Society
North Dakota Chapter
South Dakota Chapter

7.2 Comments Received During Comment Period and Responses

Many comments were received during the comment period for the proposed rule and the environmental assessment. All of these comments have been responded to in the final rule. Only five comments specifically addressed National Environmental Policy Act issues and they are addressed below.

- Comment: The Service should prepare an Environmental Impact Statement(EIS).

Response: The commenters did not provide sufficient rationale for their belief that an EIS is required. An EIS is only required if we find that the proposed action is expected to have significant impact on the human environment. To make that determination we prepared an Environmental Analysis (EA) which analyzed the probable effects of the designation as well as several alternatives to the proposed action. The EA was made available to the public for review and comment on July 6, 2001. In addition we conducted an economic analysis that was made available to the public for review and comment on December 28, 2001. An addendum to the economic analysis also is being completed prior to this rule. Based on these analyses and comments received from the public, we prepared a final EA and made a Finding of No Significant Impact (FONSI), negating the need for preparing an EIS. The final EA, final economic analysis, and the FONSI provide our rationale for determining that critical habitat designation would not have a significant effect ion the human environment. Those documents are available for public review at the South Dakota Ecological Services Field Office (see ADDRESSES section).

- Comment: The Fish and Wildlife Service should consider a broader range of alternatives; e.g., excluding areas of potential habitat.

Response: We disagree with the commenter. We considered a no-action alternative and three action alternatives. Two of the action alternatives that were not chosen had greater amounts of habitat than the proposed alternative. The final designation has even excluded additional habitat from the original proposal. Therefore, we have provided a sufficient range of alternatives and actually chose the alternative that was most exclusive.

- Comment: The draft environmental assessment is inadequate and ignores the lack of tax considerations and social and human impacts, e.g., loss of crop land because of the lack of water.

Response: We disagree. The final EA has been revised to include information from the economic analysis and the addendum to the economic analysis. However, we do not agree that crop land will be lost solely because of the designation of critical habitat. Water supply or lack thereof is a much broader issue than critical habitat designation.

- Comment: The draft environmental analysis fails to include cumulative impacts and connection actions.

Response: We disagree. We did consider cumulative impacts in the draft and final EA but since we determined the impacts to be relatively small we believe only minimal incremental impacts will occur when added to other past, present, and reasonably foreseeable future actions. If we had determined significant impacts then we would have either prepared an Environmental Impact Statement (EIS) which would have considered more detail in regard to cumulative impacts and connection actions or deleted sites with significant impacts.

- Comment: There is a disagreement with a statement in the Environmental Assessment (EA) that states that recreational impacts are significant on the entire 80-mile stretch of Lake Sharpe.

Response: We have changed the text of the EA and the final rule to better reflect the nature of recreational impacts on Lake Sharpe.

8.0 List of Contributors

Nell McPhillips, Fish and Wildlife Biologist
Fish and Wildlife Biologist
420 S. Garfield, Suite 400

Robyn Niver,

Pierre, South Dakota 57501

420 S. Garfield, Suite 400

605-224-8693, extension 32

Pierre, South Dakota 57501

605-224-8693, extension 31

Karen Kreil, Fish and Wildlife Biologist
Erika Wilson, Fish and Wildlife Biologist
3425 Miriam Avenue

203 W. Second St.

Bismarck, North Dakota 58501

Grand Island, Nebraska 68801-5907

701-250-4481

308-382-6468,

extension 25

9.0 References Cited

- Bailey, A.M., and R.J. Niedrach. 1965. Birds of Colorado Vol. 1. Denver Museum of Natural History.
- Boyd, R.L. 1991. First nesting record for the piping plover in Oklahoma. *Wilson Bulletin* 103:305-308.
- Brown, W.H. 1971. Annotated list of the birds of Iowa. *Iowa State Journal of Science* 45:387-469.
- Busby, W.H., D.W. Mulhern, P. G. Kramos, and D. A. Rintoul. 1997. Nesting piping plover and least tern on the Kansas River. *Prairie Naturalist* 29:257-262.
- Carlson, C.M., and P.D. Skaar. 1976. Piping plover in Montana. *Western Birds* 7:69-70.
- Colorado Department of Natural Resources. September 1994. Piping Plover *Charadrius melodus* and Least Tern *Sterna Antillarum* Recovery Plan.
- Corn, J., and M. Armbruster. 1993. Piping plover diets on the Central Platte River. Final Report by U.S. Fish and Wildlife and U.S. Bureau of Reclamation.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31. 131pp.
- Dinan, J., G.A. Wingfield, and J.G. Sidle. 1993. Surveys of least terns and piping plovers in Nebraska. In Higgins, K. F., and M. R. Brashier, eds. Proceedings, The Missouri River and its tributaries: piping plover and least tern symposium. South Dakota State University, Brookings, South Dakota.
- Ducey, J. 1983. Notes on the birds of the lower Niobrara Valley in 1902 as recorded by Myron H. Swenk. *Nebraska Bird Review* 51:37-44.
- Haig, S.M. 1992. Piping plover. In *The Birds of North America*, No. 2 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.
- Haig, S.M., and L.W. Oring. 1985. Distribution and status of the piping plover throughout the annual cycle. *J. Field Ornithology* 56:334-345.
- Haig, S.M., and J.H. Plissner. 1993. Distribution and abundance of piping plovers: Results and implications of the 1991 International Census. *Condor* 95:145-156.

- Heinemann, L.D. 1944. Nesting of the piping plover and least tern. *Nebraska Bird Review* 12:9-10.
- Minnesota Department of Natural Resources. 1999. Piping plover recovery and monitoring in Minnesota, 1999. Unpub. report submitted to the U.S. Fish and Wildlife Service.
- Moser, R.A. 1942. Should the belted plover be recognized as a valid race? *Nebraska Bird Review* 10:31-37.
- Nebraska Game and Parks Commission. 2001. The 2001 piping plover and least tern census - Nebraska. Nebraska Game and Parks Commission.
- Nebraska Game and Parks Commission. 1995. Nebraska's Threatened and Endangered Species-Piping plover. Nebraska Game and Parks Commission.
- Nelson, D.L. 2000. Least Tern and Piping Plover nesting status in Colorado. Unpublished Report of the Colorado Division of Wildlife.
- Peake, J., M. Peterson, and M. Lastrup. 1985. Interpretation of vegetation encroachment and flow relationships in the Platte River by use of remote sensing techniques. Remote Sensing Applications Lab. Univ. of Ne. Omaha, Nebraska. 36 pp.
- Peyton, M., and A. Matteson. 1999. Least tern and piping plover nest monitoring final report 1999. Unpub. report of the Central Nebraska Public Power and Irrigation District.
- Platte River Whooping Crane Maintenance Trust. 2002. Habitat management and research. <http://www.whoopingcrane.org/htm/habitat1.stm>. (28 May 2002).
- Plissner, J.H., and S.M. Haig. 1997. 1996 International Piping Plover Census. Report to the U.S. Geological Survey, Biological Resources Division, Forest and Rangeland Ecosystem Science Center, Corvallis, Oregon, USA.
- Ricketts, T.H., E. Dinerstein, D.M. Olson, C.J. Loucks, W. Eichbaum, D. DellaSala, K. Kavanagh, P. Hedao, P.T. Hurley, K.M. Carney, R. Abell, and S. Walters. 1999. Terrestrial ecoregions of North America: A conservation assessment. Island Press, Washington, D.C.
- Ridgway, R. 1874. Notes upon American water birds. *The American Naturalist* 8(2): 109.
- Ridgway, R. 1919. The birds of north and middle America. Bulletin 50, U.S. National Museum. 129-132.
- Sidle, J.G., and E.M. Kirsch. 1993. Least tern and piping plover nesting at sand pits in Nebraska. *Colonial Waterbirds* 16:139-148.

- Simons and Associates. 2000. Physical History of the Platte River in Nebraska: Focusing Upon Flow, Sediment Transport, Geomorphology, and Vegetation. Located at: <http://www.platteriver.org/library/index.htm>
- South Dakota Ornithologists' Union. 1991. The Birds of South Dakota, 2nd Edition. Aberdeen, South Dakota.
- Stiles, B.F. 1940. Nesting of the piping plover in Iowa. Iowa Bird Life 10:48-49.
- U.S. Department of the Interior, Governor of the State of Nebraska, Governor of the State of Wyoming, and Governor of the State of Colorado. 1997. Cooperative agreement for Platte River research and other efforts relating to endangered species habitats along the central Platte River, Nebraska. 14 pp + attachments.
- U.S. Fish and Wildlife Service. 1988a. Atlantic Coast Piping Plover Recovery Plan. U.S. Fish and Wildlife Service, Newton Corner, Massachusetts. 77 pp.
- U.S. Fish and Wildlife Service. 1988b. Great Lakes and Northern Great Plains Piping Plover Recovery Plan. U.S. Fish and Wildlife Service, Twin Cities, Minnesota. 160 pp.
- U.S. Fish and Wildlife Service. 1994. Technical/Agency review draft revised recovery plan for piping plovers, *Charadrius melodus*, breeding on the Great Lakes and Northern Great Plains of the United States. U.S. Fish and Wildlife Service, Twin Cities, Minnesota.
- U.S. Fish and Wildlife Service. 1997. Biological Opinion on the Federal Energy Regulatory Commission's Preferred Alternative for the Kinglsey Dam Project (Project No. 1417) and North Platte/Keystone Diversion Dam Project (Project No. 1835). U.S. Fish and Wildlife Service, Grand Island, Nebraska.
- U.S. Fish and Wildlife Service. 2000a. Biological opinion on the operations of the Missouri River main stem reservoir system, operation and maintenance of the Missouri River bank stabilization and navigation project, and operation of the Kansas River reservoir system. U.S. Fish and Wildlife Service, Region 6, Denver, Colorado, and Region 3, Ft. Snelling, Minnesota. 286 pp.
- U.S. Fish and Wildlife Service. 2000b. Pine and Curry Island Piping Plover Report, 2000. U.S. Fish and Wildlife Service, Twin Cities, Minnesota.
- U.S. Fish and Wildlife Service and North Dakota Game and Fish Department. 1997. North Dakota Piping Plover Database. U.S. Fish and Wildlife Service and North Dakota Game and Fish Department unpublished report.
- Williams, G. 1978. The Case of the shrinking channels - the North Platte and Platte Rivers in

Nebraska. U.S. Geol. Surv. Cir. 781.

Ziewitz, J. W., J. G. Sidle, and J. J. Dinan. 1992. Habitat conservation for nesting least terns and piping plovers on the Platter River, Nebraska. *Prairie Naturalist* 24:1-20.